THE YEAR BOOK OF EDUCATION

1954

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1954

MERTON TRAINING COLLEGE
MADRAS

THE YEAR BOOK OF EDUCATION 1954

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INTRODUCTION

THIS is the second issue of the YEAR BOOK that has been prepared in a happy partnership between two institutions much closer in spirit than they are in miles, and the second Introduction that has appeared over our proudly written signatures.

Like all its recent predecessors, this volume is written round a central theme—the role of education in the social and economic development of technologically underdeveloped areas. Like all our themes, this has expanded in meaning as the jargon of the accepted phrase is brought under scrutiny. Which is the country in which the possibility of a fuller life for the people does not depend upon a greater application of scientific knowledge to the more intelligent utilization of material resources? Is not every country underdeveloped? In this volume 'underdeveloped' is not a term of reproach or disrespect. It serves to direct our attention to the fact that there are many countries in which the standard of life of the people is far lower than it might be and ought to be.

This theme is part of a wider theme which is particularly appropriate for treatment in an Anglo-American publication. Western Europe and the countries originally populated by settlers from Western Europe have a common heritage of belief and practice, now infinitely varied in its application, but carrying the unmistakable marks of an origin in a common assessment of fundamental human values. Even those who cherish this tradition must find it hard to discern what is its true essence and what part of it derives from the accidents and the circumstances of the peoples among whom it has grown up. Many peoples in different parts of the world are tempted to see this Western tradition as a symbol of success, and perhaps more particularly of material success, and to think that their way of progress lies in taking over this tradition to the displacement of their own. Happily there is often an instinctive reaction against this solution—in appearance so simple and in reality so impossible—and a realization that what is needed is a critical study of the Western tradition to discover what part of it should be assimilated in developing local tradition and what part should be rejected. We hope that this volume will be of use to those in many countries who are thinking in this way.

We receive many letters to the effect that this or that article contains errors of fact or opinion or that it omits relevant and important facts. Reviewing journals have from time to time made similar complaint. We remain firm and unrepentant on the fundamental policy of the YEAR BOOK as set out in the Introduction of

each succeeding volume. Teachers College, the Institute and the Editors accept full responsibility for selecting contributors of standing who are able to write from within the countries concerned and from their own experience. We accept no responsibility for what they write, and indeed we would not be competent to exercise such a responsibility. We attempt no censorship, and the responsibility for each article remains with the author under whose name it appears.

WILLIAM F. RUSSELL
President Emeritus: Teachers College, Columbia

G. B. JEFFERY
Director: Institute of Education, London

Before this volume of the YEAR BOOK appears, William F. Russell will have relinquished his office as President of Teachers College, thus bringing to an end a period of fifty-seven years in which the Presidency has been held by father and son. This Institute salutes him as one who has given great service to education and as one who has taken a notable part in the building of a strong bridge across the broad Atlantic. It is our fervent hope that William F. Russell has many happy years still before him in which he will continue to serve the causes he has already served so well.

G. B. JEFFERY
Director: Institute of Education, London.

EDUCATION AND THE TRANSFORMATION OF SOCIETIES

A GREAT economic revolution is sweeping across the world and a new climate of thought and feeling is being created. Characteristic of it, especially in the new nations of Asia and Africa, is a naïve and optimistic faith in the power of education. Many believe that in the societies of to-morrow the school will take the dominating place occupied in mediaeval cities by the cathedral: the centre and focus of the aspirations of the community, the agency through which the level of life is raised and ennobled. All this is no new thing. From Plato onwards, philosophers have given expression to such hopes. For centuries statesmen have paid at least lip service to the same ideals. But now the great masses of the people have been fired by them and they have learned to see in the school an instrument by which their children may be given a chance to reach new heights.

The much publicized achievements in education of the Soviet Union and of Japan have perhaps been decisive in spreading this outlook. Everybody knows that the U.S.S.R. has for thirty years devoted an immense effort to the elimination of illiteracy, to the diffusion of technical knowledge, and to the strengthening of political loyalty. It is well realized that success here was the necessary condition for success in the industrial and, ultimately, in the military fields. Japan, too, was at once the most literate, the most industrialized, and the most powerful nation of Asia. The advanced countries of the West know, and have known for years, that here, in the area of education, is the very heart of the whole problem of satisfying the wishes of their less fortunate neighbours. An illustration is the support given, right from the start, to UNESCO's efforts in 'Fundamental Education'. "That is a subject which interests a large number of our member states," said the first Executive Secretary of the Organization. "We are really going to turn into action the provisions that have been made about removing poverty and ignorance and helping the poorer sections of the world community."

In addition, internal political conditions since the end of the Second World War have everywhere favoured the ready acceptance of these views. In the West, the parties which represent the interests of organized workers have pressed continuously for easier access to secondary schools and universities, thereby affirming their belief that more education for all is a good thing. In Asia and Africa, nations having attained full political independence are turning to the

next part of their historic task: the achievement of full social and economic independence. Their leaders have well understood that the condition for this is the mobilization not only of natural but of human resources, and that schools can be used to this end. Thus, one of the first decisions of the new Government of the Indian Union in 1946 was that a fifty-year development plan for education should be put through in fifteen years. Similarly, as soon as the Government of the Gold Coast obtained effective power over internal affairs, it decided to introduce at once compulsory education for all children, disregarding completely such difficulties as shortages of teachers and of buildings.

The tide continues to run strongly. Yet, listening to the discussions of experts, a certain touch of disappointment and anxiety is noticed. Mass-education campaigns have not been as successful as had been hoped and the results are not always what had been expected. In some regions there is a flagging of effort, and scepticism is often expressed. There is a growing realization that the problem of achieving social transformation and economic betterment through education has not been fully understood in all its terrifying complexity. It is becoming clear that even if education is necessary to progress it is not by itself sufficient. It can exercise its beneficent effects only if factories are built as well as schools, if production methods are changed, if new social institutions develop. Furthermore, not any kind of schooling is useful. Merely to copy the education of the West may be not only futile but positively harmful. The task of translating European methods into another social idiom of adapting them to a new climate, is more complicated and difficult than was once thought. There is need for an educational theory capable of adequately directing practical effort. Our hope in the present YEAR BOOK is that of making a contribution to the diagnosis and analysis which must be the foundation of such a theory.

Our first but not exclusive concern is with under-developed regions. By this term we do not imply that these are backward in culture, humanity, or civilization, but only that their populations have not yet learned to use fully the powers which science and technology have created. In this broader sense under-developed areas are found even in the most fully industrialized countries, for example in the Highlands of Scotland and the mountains of Tennessee. Evidently, such regions display great diversity of structure and a wide range of religious, cultural, and linguistic characteristics. They have in common, however, a widespread desire to acquire the apparatus and the gadgets of a machine civilization. Everywhere people want television sets, motor-cars, and refrigerators. But for the most part they have no desire for the patterns of thought and behaviour typical of those national groups which have created modern science and twentieth-century industrialism. Europeans do not wish to ape Americans: and Asians do not for the most part

want to shed their traditional culture. They seem to have but small appetite for industrial discipline and Western mores. What they seek is the external result, the fruit without the preliminary preparation and labour.

Two questions arise imperiously: Is Western technology detachable from the Western cultural ground? Is it transferable to anyone who learns the technical tricks? Natives born in central African villages can certainly learn these simple techniques and a few may qualify as engineers and scientists. Yet this does not take us far. To learn to drive a tractor is easy. To learn how to maintain its productive performance and how to repair it is another matter, for it is not a one-man skill. And to learn how to design, produce, and finance the distribution of this tractor is a still more difficult problem. To make and to maintain large numbers of complicated machines requires a deep change in a whole community. The examples of the Soviet Union and of Japan seem to negate this view—but there were special historical factors in each case. Western Russia in 1918 had already reached a considerable degree of industrial development and it was, without doubt, part of the European complex. It possessed excellent universities and technical colleges. The tasks of the Soviet leaders have been, then, first to diffuse knowledge and skill among the masses—a problem similar to that found in all other European countries—and next to transmit Western culture from the European three-quarters to the Asian quarter. As for Japan, that country had in 1870 a homogeneous, well-disciplined, obedient, and industrious people; a relatively small area with easy communications; pride in the past and faith in the future; a culture pattern not in any way antagonistic to modern industrial organization; and above all far-sighted leadership of much political wisdom. The situation here was unique. Besides, the social techniques employed were extremely ruthless and affected every aspect of everyone's life. They would be inacceptable to any human group that has been touched by humanitarian and liberal ideals or which pays attention to individual rights and freedoms.

Yet another instance of the successful adoption of industrial civilization is Europe itself. Six hundred years ago that subcontinent was neither technically nor scientifically ahead of China, India, or the Muslim World. The expectation of life of its inhabitants was no greater, their social institutions no more developed, their philosophy no more subtle, their habitual modes of thought no less superstitious. Europe, however, was favoured by a set of very special circumstances: in the first place by the discovery of the Americas, which put a premium upon science and gave it high prestige while at the same time placing in the hands of enterprising and vigorous groups unlimited resources of land and capital. The 'high' intellectual traditions developed in its universities favoured the growth of a positive science which in the hands of men of

genius like Galileo taught how best to exploit natural resources. New social institutions were invented and established and they promoted commercial and industrial initiative. Its mores strengthened a respect for individual liberties which, in turn, released a great fund of invention and energy. Western Europe created industrial technology and, in the course of centuries, absorbed it into its social structure and way of life. It was a native growth: the problem faced was one of cultural development, not one of the assimilation of foreign elements. Of course Europe learned from other areas. The imports from Asia and from the Americas changed the diet and the habits of all. Eastern art and African rhythms modified aesthetic standards. Devices like the Chinese system of Civil Service examinations were adopted. But all this was, in a sense, little more than superficial adaptation. It was not a massive adoption of a whole technology. At no stage was there anything like a challenge to fundamental values, nor was there a demand for radical changes in patterns of thought, attitude, and behaviour. And Europe had time for a gradual and evolutionary change. Modern under-developed nations are starting late, entering a highly competitive modern world when technology is far advanced and enormously more complex. Their very survival in fact depends upon a rapid, almost revolutionary, adjustment to these new demands on society.

Cultural Transmission

Whenever different cultures have made contact they have learned from each other. The process of imitation and borrowing is one of the dominant themes in the history of mankind. It is recorded in the memoirs of generals, in the archives of trading companies, in the files of modern cartels. It appears in the sacred writings of the great world religions and on the stone monuments scattered across six thousand years of history in the Middle East. In all these historical data the instruments and techniques of transmission—as well as the motives of those who gave and of those who received—are clearly perceived.

The oldest method of transmitting technical knowledge was simply by showing and imitation. It was thus that the great fundamental inventions of fire, of agriculture, of domestication of animals, of use of metals, gradually diffused across the world. Even to-day it continues. The housewife who tells her neighbour how she cooks a particularly delicious dish; the county agent who shows his friends the latest findings of the great agricultural experimental stations; and the surgeon at a medical conference who describes his successful operations, are all using this ancient process.

Trade, commerce, and industry have played a part of fundamental importance. There have been few instruments of technological transmission more effective than the great British and Dutch East Indies trading companies. Italian caravans to Cathay left a track

of European and Near Eastern influence across Central Asia that can still be seen. And in modern times the place of these mercantile ventures has been taken by the great plantations and the petroleum companies penetrating into remote deserts and jungles; by international airlines and European-constructed railways; by hydroelectric power stations and a complex of manufacturing subsidiaries; by mass merchandizing organizations, radio advertising, and foreign brand names. Even languages have changed under this impact—and *colt* means revolver, *kodak* means camera, *portland* means cement, and *coke* a soft drink. Silk mills from Lyon, cotton mills from Manchester, steel mills from Pittsburg, and pharmaceutical plants from every major Western power are operating under local management, with local labour, for local profit, in half the underdeveloped areas of the world. The educational effects of this enormous diffusion process have been incalculable, perhaps the largest of all in terms of persons reached and degree of social change produced.

Great journeys, however, have not been undertaken only by those who wanted to buy and sell. There have been pilgrimages to sacred places and wanderings of missionaries driven by faith. These felt that they had to carry a light to their less fortunate brethren and teach them higher values and better ways. The monks who moved northwards into Europe after the downfall of the Roman Empire taught Christian beliefs and morality to the Barbarians and preserved in their monasteries the technical knowledge as well as the philosophy of the Classical World. And in modern times missionaries have transmitted to the native peoples of Africa, Asia, and America the science, technology, and ethics of the West.

The spread of a world religion is always accompanied by the spread of knowledge of certain sacred books and thus of a language and of a writing system. The Latin and Greek alphabets are used wherever Christianity has been established. The Arabic alphabet has followed the Koran. When the King of Kudara, one of the ancient principalities of Korea, sent his envoy Achiki to the court of Emperor Ōjin of Japan in A.D. 285 he was accompanied by Wani, a tutor for the Emperor's son. Among his teaching materials were the *Analects* of Confucius and the *Thousand Ideographs*. Wani came to the Kyoto court to instruct the Crown Prince in the Chinese art of writing, but he did more than introduce an ideographic system into Japan: he also brought Confucian philosophy, which converted the majority of the people to a new religion, changed fundamentally indigenous Japanese art and architecture, and profoundly influenced the philosophy, social system, and politics of the Japanese people from that time to this.

In this connexion, mention might also be made of Kemal Atatürk's famed reform of 1928 in the Turkish alphabet which ostensibly aimed at increasing the efficiency of Turkish communications and at assisting the growth of literacy among the masses.

Actually it turned out to be one of the most effective political and educational devices ever adopted to draw a curtain between a people and its past. It functioned as a screen through which the culture of the past had to pass in order to reach the generations of the future. Only those old books which were thought to advance the political goals of the Turkish Revolution were transliterated to the new script, and to those who were educated after 1928 the old books were as incomprehensible as if written in some unknown foreign language.

Empires and Colonies

Not only trade and religion, but war and conquest help to transmit knowledge and skill. The impact of armies on civil populations may itself be educative—the Roman legions in Rumania and the Normans in England, to mention only far-distant episodes. In modern times, the whole idea of Empire-building has fallen into disrepute and the name imperialist ' has become a term of abuse. Yet the contributions made by great Empires to the advancement of mankind is immense. They established peace over vast areas and thereby facilitated the movement of men, goods, and ideas; they spread better seeds, new plants, and improved techniques. Rome taught its subject peoples engineering, military science, and law, while better methods of husbandry spread all over the Mediterranean basin and even beyond. Its influence can be seen to-day not only in the ruins of Palmyra and Petra but in the laws of Argentina and Portugal; in the organization of the Catholic Church and the Latin alphabet. When the English Raj withdrew from India, a legacy of unifying language remained, as well as more than four hundred institutions of higher learning, and a Civil Service pre-eminent in the world. And Indians, whatever their mother tongue may be, continue to make contact with the West through the medium of English, their lingua franca. The Spanish Empire virtually obliterated three great civilizations but left a continent and a half indelibly stamped with Spanish culture, and through it, with Roman, Greek, and Muslim cultures. Marching up the black stone balustrades of Persepolis are the bas-relief figures of colonial peoples from the Empire of Darius, bringing their offerings of goods and services, pooling the technological knowledge of their time. And on the walls of the temples of Luxor and Karnak, in the tombs of the Valley of the Kings, there are the hieroglyphic records of the contribution of subject peoples to the rulers of the Upper Nile. Often the defeated peoples were reduced to slavery, a degrading and brutalizing thing both for conqueror and conquered. Yet, in drawing up a balance sheet, the gains should not be overlooked. In the ninety years since Emancipation the descendants of slaves in the United States have moved from abject poverty to the second most favoured economic position in the world to-day, excelled only by

the white population of the United States.[1] American Negroes enjoy a higher annual income than any European population, they have a larger proportion of university graduates, and have access to those higher professional posts which in other countries are the preserve of the upper classes. Brazil offers an equally impressive example, in the creation of a new race and a new culture through the miscegenation of the Portuguese ruling groups with emancipated Negro slaves.

The Changing Role of Government

On the whole, knowledge of new techniques tended to diffuse rather slowly in the past: it took nearly two thousand years for the Gauls to learn from the Egyptians how to smelt iron, and the potato was not consumed in large quantities in Europe before the middle of the eighteenth century: nearly two hundred years after its first introduction. As time went on, however, and as civilization advanced, things moved more quickly. In the first place, communications became speedier and printing facilitated quick diffusion of learning. In the second place, governments themselves, as they assumed greater responsibilities, began to take interest in training the populations they ruled so as to increase their productivity and thus their capacity to pay taxes. The British rulers of India, for example, encouraged the building of schools and the education of a class capable of providing clerks and civil servants. In a word, they set themselves deliberately to transform—at least in certain aspects—the cultural patterns of dependent populations, using education for that end.

Education is, of course, itself an aspect of cultural transmission. Everywhere and always it has been the agency through which the culture of the present generation is transmitted or, better, re-created in the next. The pattern of colonial education, however, was something else. Provided for adults, it was an agency for adding on to an existing culture certain elements drawn from another. Provided for young people, it was an attempt to form them into one culture —usually the Western—while all out-of-school influences fostered the growth of another. Inevitably, the results were often very different from those aimed at. Nevertheless they were impressive enough and they catalysed social change.

One effect of such policies has been that in every country which is or was once a colony or a semi-independent protectorate there is now a numerous class of intelligent men, who are well acquainted with Western thought but whose emotional and cultural roots lie elsewhere. These—they are often called the *intelligentsia*—are the

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[1] Leaving out of account the curious case of the Sheikdom of Kuwait, where oil royalties give its semi-nomadic population a *per capita* income twice that of the United States.

groups which have led their countries to political independence and who are now shaping their future.

It should be noted that what has been said above applies particularly to colonial powers like Britain, France, or Belgium. But when other nations, like the United States, developed industry and reached out for markets and for sources of raw materials, they too became interested in transmitting certain aspects of their culture. Since for a variety of reasons they did not rule over colonial domains their effort was channelled chiefly into the activities of independent commercial enterprises—several are described in this volume—or specialized agencies of international organizations.

In modern times international clubs and associations, such as Rotary International, International Chamber of Commerce, and the Masonic Lodge, conduct major educational programmes. International labour unions and professional associations are media of exchange of technical information. Organizations like the International Air Transport Association link major industries in many parts of the world, establish international standards of operational techniques, and maintain minimum levels of training for their members' staffs. Great philanthropic foundations, like the Rockefeller Foundation, Carnegie Corporation, Kellogg Foundation, and Ford Foundation, carry on very extensive international programmes of education, and exchange of technical information and personnel. In recent years, there has grown up an impressive list of governmental and international organizations designed to provide similar services: the Pan American Union, the Institute of Inter-American Affairs, The British Council and the *Alliance Française*, the United States Information Service, the Institute of International Education, and UNESCO.

The development of international as opposed to national agencies is, on the whole, welcomed by the governments of under-developed countries. In most cases these are intensely jealous of their national independence and not only suspicious but resentful of anything that might be interpreted as economic imperialism. But they realize only too well the difficulties of their task and their own need of help, both material and technological. Aid extended by any single country is open to objections which are not raised acutely when it is provided through the agency of an organization partly under the control of the recipient.

The great cry, of course, is for speed and yet more speed. The example of Japan has been quoted continually. Here was a country which had emerged in twenty-five years from a mediaeval feudalism to a modern state capable of decisively defeating China, then the greatest nation in Asia. In another ten years it had humbled Czarist Russia, one of Europe's major powers, and presented the world with the reality of Asia's first technological state. Twelve years later Japan was able to dictate terms to the victorious Allies

and win an empire in the Pacific. Fourteen years later it had the third greatest navy and defied the world as it marched into continental Asia. And by 1941, only ninety-three years after emerging from the chrysalis of the mediaeval Tokugawa Shogunate, Japan was one of the seven Great Powers of the world, and for two years fought the Allies to a standstill in the Pacific.

In view of such achievements, the spokesmen for the underdeveloped territories demanded after World War II the fruits of Western technological skill. They rejected evolutionary change, and cried out for immediate, revolutionary social improvement. They charged that their progress had been grossly delayed by the exploitation of imperial governments and avaricious private industry. The possibility that the soil for technological development had in their instance not been receptive, and that the seeds which had been planted had failed to germinate, was summarily dismissed as European rationalization and imperialist propaganda.

The Reaction of the West

These claims did not affect the U.S.S.R. in any immediate way, apart from opening up possibilities of propaganda and of political activity. The Soviet Union had suffered much damage during the war and an enormous task of reconstruction had to be tackled. In consequence, there was little surplus left for some years to assist in the industrial development of Eastern European states: a fact which may have helped to bring about the break with Jugoslavia, an underdeveloped country eager to adopt modern methods of manufacture. But the Union undoubtedly continued, perhaps with increased zeal, the pre-war policy of fostering the economic and industrial growth in its own backward Asiatic republics. The whole of this area being closely controlled and guarded, there is little information available regarding what has been happening, and it is difficult to judge the part that education is called upon to play or the degree of success that has been achieved.

From the point of view of the West, however, the situation was a revolutionary one. A wave of intense nationalist feeling was sweeping across all the less-industrialized countries. It was clear that these were absolutely determined to take their fate into their own hands, no matter what the cost. India, Pakistan, Burma, Indonesia attained political independence. In some countries, the property of foreign companies was seized without compensation, in others the mere proposal to accept loans from abroad in order to develop oil fields led to riots in the streets. It seemed to Western observers as though some people would prefer to allow natural resources to lie idle under the soil or oil to run into the sea rather than to let foreigners profit from turning such raw material into wealth for all. The overwhelming fear, of course, was that these same foreigners

would exercise too much political pressure upon the national government and claim special privileges.

Such a dilemma is, in fact, tragic. On the one hand, there was a clamour for a quick rise in the standard of living, a rise possible only if very large investments, representing capital goods, could be secured from abroad. On the other hand, there was the destruction of those social and political conditions which encourage either private persons or governments to take the risks attendant upon foreign investment.

Furthermore, countries like France and Great Britain, with a long tradition of lending capital, are no longer in a position to meet the needs fully. France has been bled white by a long and rapacious occupation, and is much stretched by a continuing effort to reconstruct the French Union on a new political basis. Nevertheless, since 1948 France has spent a greater proportion of her national income than any other nation on the development of her overseas territories. The United Kingdom has done whatever her resources allowed, of course, chiefly in relation to countries within the British Commonwealth of Nations. Debts to the new Asian dominions and to the Middle East have been paid largely in capital goods. Loans have been made to the African territories and the Colonial Development Fund has been greatly expanded. Attempts have been made by the Government itself, at great cost, to develop new forms of agricultural production, for example that of ground nuts in Kenya and Tanganyika and of poultry in Gambia. These attempts tragically failed, partly for technical and partly for social reasons, though valuable lessons were expensively learned. Lastly, many of these measures were consolidated in the so-called Colombo Plan, which is briefly described in articles in the present volume. The total effort has been vast. The total contribution in 1954, in gifts and loans to under-developed countries, exceeded £450 millions—about $1·25 billions.

The United States also reacted strongly to the world situation. Usually in a way which, far from excluding nations which, like Sweden or Switzerland, controlled no colonies, encouraged their participation in the industrialization of under-developed countries. There were measures of relief like UNRRA and all sorts of activities promoted by the United Nations; to all of which the U.S.A. contributed generously. True to her faith in private enterprise the United States Government also tried to encourage investment abroad, but American finance proved in this field to be rather cautious and conservative. This is easy to understand: experience certainly did not encourage the taking of genuine risks and, besides, there were plenty of rewarding opportunities in the domestic field. The gap was filled to some extent by grants and gifts of astonishing generosity but, by 1949, it had become clear that even more was needed. President Truman then stated what has come to be known as the 'Point Four Policy' in his Inaugural Address of January

20th, 1949, entitled *The Faith of the American People.* He held that although there were limits to what the U.S.A. could afford to do for the assistance of other nations, " imponderable resources in technical knowledge are constantly growing and are inexhaustible ". He called upon his countrymen to " embark on a bold new programme for making the benefits of our scientific advances and industrial progress available for the improvement and growth of under-developed areas ". The meaning of the Point Four Policy is analysed in this YEAR BOOK by Dr. Paul Duncan, but a few reflections may perhaps here be added.

President Truman's statement aroused exaggerated hopes. The astonishing growth in the industrial production of the U.S.A. and the prosperity of its inhabitants was known in the most remote parts of the world. It was the Mecca of engineers and the Utopia of technologists. Evidently, the fantastic output of the country was the outcome of a fortunate interaction between two sets of factors: a new continent rich in raw materials and a society capable of exploiting them and putting them to use. Americans themselves are sometimes prone to play down the importance of the first—the wealth of natural resources—and to stress the qualities of their fellow citizens: their drive, energy, and technical ' know-how '. Many of them tend to believe that the world's material problems could easily be solved if only other nations could acquire these industrial virtues and learn the technological ' know-how '. Thus President Truman's proposal was often seen as a problem of teaching. " In its application (says Dr. Duncan) Point Four has been essentially a gigantic effort in mass education . . . in earning a living, in maintaining health, in raising a family, in contributing to community and national life . . . self-help is the keynote."

Nevertheless, it was hoped also to " foster capital investment in areas needing development ", and this for the good of those areas. " The old imperialism—exploitation for foreign profits—has no place in our plans."

In spite of these reassurances and of the undoubted benefits that have already been brought to many countries, criticism has been harsh. In part this is simply the result of disillusionment. Many nations submitted grandiose plans which would have entailed expenditure as large as the total which the United States Congress was willing to authorize for aid to all the world. Some recipients felt humiliated with what they considered insignificant allotments, while others resented controls over the use of the funds. The social results of economic projects appeared unduly delayed. Foreign advisers and recipient nations differed in their basic philosophy regarding the ways the funds should be spent, and there followed the inevitable friction between proud people of basically different backgrounds.

Foreign criticism of the Point Four, and of subsequent American

Technical Assistance programmes, has been of four types. Confirmed Marxists have argued against it on the ground that their philosophy showed that it must have degrading and anti-democratic effects. Those who are committed to antagonistic political ideologies (whether of the extreme Right or Left), as well as many moderates who are rather cynical of the motives of the Great Powers, have argued that capitalism is not and cannot be idealistic and that what is proposed as philanthropy is actually a disguised attempt to secure foreign markets and controls. Some leaders in under-developed countries, who represent powerful and sometimes corrupt vested interests, have tended to look upon the programme as a 'pork barrel', and to demand increased aid. They maintain that the United States *owes* them more help, and threaten co-operation with Communism if that aid is not forthcoming. Finally, Point Four has been seriously criticized by honest and well-meaning people who have been unwilling to recognize the social costs which they must pay if the programme is to succeed. They welcome and expect its material benefits. But they fear the economic, social, and political changes entailed.

Criticism of the programme has not been limited to foreign observers and recipient nations. There has been a strong and vocal opposition to the policy within the United States. Most Americans have been willing to grant the weight of many of the arguments which President Truman advanced to justify his proposal. There is a powerful factor of humanitarianism in American society, and an uncomfortable feeling is experienced when it is realized that the United States has half the industrial wealth of the world while two-thirds of the world's population lives in misery. The American points with pride to fifty-four philanthropic foundations which last year had $1,000,000 to $450,000,000 each in assets; and welcomes the more than thirty thousand foreign students who each year study in the United States: more than 60 per cent. of them from under-developed areas. Many, indeed, accept the basic political theses—that the United States has a moral obligation and will build up a reservoir of goodwill by meeting it; that the nation itself will ultimately benefit economically by building up markets for high-priced goods; and that it will benefit strategically by opposing Communism with strong and economically healthy regimes. Yet many Americans experience certain doubts.

There is, in the first place, a relatively small minority of traditional isolationists, who contend that interference in foreign affairs is none of America's business. There is a larger group which sincerely wants to help the peoples of the depressed areas, but fears that help through existing channels will merely perpetuate what seem to them bad political regimes and undesirable social classes. They fear that the United States will become identified with the regimes they deal with and will thus be discredited in the eyes of the world.

But by far the largest percentage of the critics reject the methods rather than the goals of the policy. They hold that governmental assistance cannot be economically successful where an ordinary commercial venture would not be. They hold that government underwriting is bad strategically because it involves the United States in political risks and may lead to war. They believe this to be nothing but ' neo-colonialism.'

Lessons Learned

Yet in spite of these criticisms and doubts, technical-assistance programmes have gone on developing and are gathering momentum. By now an enormous amount of experience has been gathered by the old ' Colonial Powers ', such as Britain and France, as well as by relatively newcomers like the United States. In particular, certain doubts become stronger as projects progress to the point where results can be appraised.

To begin with, there is the question whether education and technical assistance are properly used if the result is merely to improve degree rather than to change kind. For instance, it has been held that if a peasant in an under-developed area can learn to increase his yield by only a very small amount it will enormously improve his living standard. This humanitarian and charitable view led to the policy known as technical assistance at the ' grass roots '—teaching how to read, to raise a few more bushels to the acre, produce a better egg or build a better ' privy '—the sort of thing aimed at in the early days of ' Fundamental Education ' or ' Mass Education '. It is now generally recognized that small uniform increases of income, without major capital accumulations, are simply swallowed up and have no measurable impact upon the standard of living of a people. A great part of the world's population lives in backward economic systems which are anachronistic and which, regardless of increased productivity through improved techniques, can never support a modern living standard. The problem, then, seems to be one of selective development in depth, permitting one section of the population or one geographical area to make major advances through a fundamental change in the technology and economy, and thus to jump beyond the subsistence level so as to be able to accumulate capital. The choice of which group or area to favour, in view of the impossibility of equal and simultaneous improvement for all, may involve a politically difficult and emotionally bitter decision. But the alternative has proved to be inadequate.

Connected with this is a major doubt as to the relevance of the definition of ' standard of living ' adopted by the United Nations and others: indeed one wonders whether the concept itself is helpful or even meaningful. The whole idea is based on a materialistic appraisal of Western society and upon a money economy. This view is sustained by the official definition of an under-developed area

as being that in which the annual income is below 400 dollars a head. But how is ' standard of living ' to be measured? One thinks first of better health, greater personal freedom, higher levels of education and of cultural appreciation, more goods in the shops. Are all these simply to be measured in cash? Obviously not. And it is useless to increase the wealth of a country if there is neither political freedom nor cultural opportunity in which to enjoy the fruits of material advance. In fact, here is a contradiction: can ' a better life ' be promoted if intervention in the cultural and political patterns is precluded?

In any case, what is meant by ' a better life '? Shall it be modelled in the antiseptic, efficient, dynamic, moneyed, and phrenetic culture pattern of the technological West? Or shall it be the contemplative, leisurely, mystical, class-structured, traditional society of the under-developed area? As we have pointed out earlier, the vocal leader of a depressed population may want the motor-cars, refrigerators, and higher purchasing power that comes with the machine and modern technology. But he may be reluctant to relinquish his ancient ways—his village system, the status of his women, his hordes of servants, his religious observances, his political vested interests. He does not realize that the machine brings with it the set of moral and ethical commitments from which the invention sprang. Western technology *can* give better medicine, but the improved health conditions will bring in their train lower infant mortality, higher birth-rates, increased population, demographic pressure, and ultimately social readjustment to meet this new cultural problem. The recipient society cannot avoid the problem: it can only select from a choice of possible solutions—slums, low-cost housing, altered wage structures, changed economics, immigration, birth control, mystical withdrawal from reality, destruction of family systems, and increased mechanization.

The greatest lesson learned from post-war experience, then, is that it is easier to establish modern industrial technology than to solve the social, moral, and ethical problems that ensue. Any competent technician can plan a steel mill in India or establish a rubber plantation in Malaya. There are no instructional problems in preparing Saudi Arabian *bedouins* or the African *bantus* for jobs in a Western technical enterprise, which any competent educator working with a plant superintendent and foreman cannot easily resolve. Production and instruction are surprisingly easy, and the world's successful experience is enormous. But neither production nor instruction inevitably lead to a solution of the real problems: the moral choices which will transform technological procedures into a real and desired improvement in the standard of living. It is to a solution of these ethical problems that the West must turn if the process of technical assistance is not to fail miserably and the effort discredited. When Leo Tolstoy, who as a youth had led a life both varied and wild,

started teaching, he asked himself the question: what moral right have I, an adult, to train children to follow my example and to mould their flexible minds in my own image? He answered in the negative and gave his pupils full freedom to decide for themselves what to do. And, later, he abandoned teaching because he was not able consistently to follow his own principles. The parable has its point. Are we of the West certain that what is good for us is good for all? What in our way of life is good intrinsically, good in itself? What can we safely pass on to other peoples without disrupting fundamentally the very bases of their lives? Let us consider in relation to these questions some problems of policy.

Policy Problems: Production

Technical and educational assistance to independent nations can be given only when it is desired by the recipient. But there is always the difficult problem of determining who shall speak for a people in expressing their desires. Is it to be the government, or a ruling clique, or a vested interest, or an uninformed mass? And in addition there will be the question of whether it is really possible for the masses of an under-developed area to make a choice: for can they reasonably know the consequences which will accrue from the introduction of technology? Leaving this issue on one side and assuming that assistance is to be given, note should be made that the donor agency—whatever its nature—has to consider difficult problems of production, distribution, control of resources, and control of personnel. Under the first of these headings, four decisions will have to be made.

First, is there any moral obligation to help what may become a competitor? In answering this question, the donor agency will of course begin by deciding whether the new possible competitor may not in fact become a better customer. Will the recipients create competitive, or rather ancillary, industries? Will the donor agency be able to invest funds and repatriate profits? If the answer to the first question is that the new economy will in fact be competitive in major areas, then a second question must be asked: is there in international technical assistance something ethically equivalent to 'fair competition' in a domestic economy? Where the donor agency is a private corporation instead of a national government, the question must be asked whether or not the monopolistic practices of an international cartel is an evil thing and whether there should be anti-trust agreements limiting such practices. Finally, the donor agency must ask if it is morally bound to extend aid even when the project is financially unremunerative. Must it provide capital, patents, and research data, technical training and education? Must a foreign agency aid a depressed area for philanthropic reasons, when the political climate or the economic realities preclude the venture from becoming economically self-sufficient?

Second, the donor agency must decide who has the right and the obligation to determine which of several alternative plans for technological advancement shall be adopted. No major area presents a single, unchallenged, certain solution to its problem of developing its natural resources. Various vested-interest groups will present various proposals. Who shall decide between them? Does the donor agency have the right to dictate solutions? Is this outside agency technically competent to select the 'best solution' for an under-developed area? Does it have the right to control programmes in which it has invested money? Or is the donor agency merely a neutral technical consultant, somewhat akin to a library reference-book?

The third policy decision with regard to production is whether the development shall be *vertical,* through self-sufficient and self-sustaining economic projects, or *horizontal,* through wide-scale, non-sustaining aid programmes. Among the detailed decisions which must be made in determining this policy will be that of choosing between a development programme organized for immediate production and one for future social and economic advancement. What type of industrial organization shall be used? What percentage of local labour used? Shall the industry be responsible for training personnel, or shall the general public? Shall the industry be organized to be self-sufficient, or dependent on local ancillary industries? Shall the wage structure be such as to encourage paternalism, or a system of free enterprise in the society?

The fourth, and one of the most difficult policy problems, will be that of determining who shall be chosen to receive the training. It is not enough to establish testing devices for technological aptitude. The real question is whether or not the donor agency, governmental or private, has the moral right to select the future *élite* of the area. An equally crucial and puzzling problem is that of determining who shall receive the capital or industrial contracts. Shall the choice be truly competitive or deliberately slanted to favour certain groups? Shall there be ethical pre-requisites: such as labour conditions, levels of profits, codes of business ethics, absence of monopoly practices, financial responsibility?

Policy Problems: Distribution

Little attention has usually been paid to the problem of equitable distribution. It has been assumed that increased productivity, the simple creation of more wealth, will inevitably benefit the general population regardless of existing systems of distribution. Obviously this is not the case, and many of the gains may be siphoned off into the pockets of certain privileged classes, or even exported from the country to be used abroad. Such a misuse of profits from a technical-assistance programme defeats its very purpose. The foreign donor agency has to face two critical questions of policy: how shall

the increased production be divided? What support shall be given to undesirable cliques in the recipient regime?

The foreign donor of technical assistance must ask itself whether it has in fact any right of control over the use of the profits accruing from a technical-assistance project. Obviously, if it is a private industrial organization, it will have rights to that portion of the profit which is paid to it in return for its technical competence and the use of its funds. But the crucial issue arises in the use of the additional profits which are retained by the under-developed area and which are the *raison d'être* of the technical-assistance programme. If those benefits resulting from the programme are misused, or primarily benefit a part of the society which is unacceptable to the general public, the oversea agency will almost inevitably be stigmatized. Yet it must ask whether it really has the right to manipulate the domestic use of the increased production and whether it is obliged to deal only with local agencies which have an 'acceptable' ethical standard; who shall determine what is in fact an acceptable ethical standard; and finally if it is possible for an outside agency to control or basically influence domestic policy without infringing upon the sovereignty of the under-developed area.

The problem becomes of critical importance when the donor agency is the agency of a foreign government. Its actions may then lead to charges of imperialism or of 'dollar diplomacy'. Such an agency obviously does not have complete freedom in dealing with recipient organizations, and its best motives may be grossly misinterpreted. Yet, in justice to its own citizens and taxpayers it must ask if it is justified in exacting certain conditions when it extends aid and whether it can escape responsibility for the social results of its technical assistance. It must, for example, face the problem of the extent to which self-determinism can be justified in a modern world with shrinking space, dwindling natural resources, and inevitable interaction and influence between nations.

Policy Problems: Control of Material Resources

If it is conceded that foreign agencies are more than merely neutral sources of technical information, then the moral judgements which they will be called upon to make will inevitably touch upon the control of material and of human resources. These are problems which have never proved easy even within national areas. In international relations, where there are widely different cultural backgrounds, they are enormously more difficult, yet cannot be ignored. With regard to the control of material resources, two questions of policy are faced: who *owns* the natural resources of an under-developed area? and who *owns* the patent of process right indispensable to the utilization of those natural resources?

It has generally been accepted in the past that a nation owns all rights above and below the soil within its territorial limits. This is

equivalent to saying that the accidental owner of surface land owns the undeveloped natural resources within it. Yet the majority of under-developed nations, while claiming the international principle, have rejected it with regard to regions or individuals within their state: in England, for instance, any oil found beneath the surface belongs to the state, not to the owner of the land. Thus, states claim in the community of nations rights which they refuse to their own citizens. There is yet a further problem: if such indispensable natural resources as subsoil minerals, water, timber, and water-sheds, fertility of the soil, fishing and sealing rights are held by the government or by private individuals in an under-developed area, the question arises as to whether they also have the right to control the exploitation of these rights. To be very specific, can they refuse to let the resources be developed? Can they determine who shall use them? And can they determine for what the resources shall be used—for atomic bombs or power for peaceful purposes, for their own luxury or their children's survival? It is commonly held that 'the people' of an area have a moral claim to its riches, but it may be asked what are the limits of this claim and from where does it come? Can a nomadic people, for instance, insist upon continuing its way of life at the cost of harming the rest of the world which needs the resources stored beneath the soil over which it wanders?

One of the most troublesome aspects of this problem is the application of such principles to economic regions which extend beyond politically determined national boundaries. Do the people who are economically dependent upon the resources beyond their national boundaries have a moral, and legal, right to determine the policies for exploiting those resources? Thus, for example, do the people dwelling in the lower basin of a great river have a moral claim to the upper water-shed on which their economic survival depends; do the fishermen of one nation have a claim on the schools of fish that pass through coastal waters of another nation; or the steel workers of a coal-poor nation upon the coal-fields of their neighbour?

Most of these questions have been at least crudely answered in international law. But a technical-assistance programme which goes no further than the bare legal decision in establishing its policy may be unwittingly storing up political tensions and economic difficulties which ultimately will quite erase its value. When it is a simple case of increasing the yield of a peasant's field by the adoption of better fertilizers, there is little likelihood of difficulty. But when it is a question of discovering, producing, processing, and distributing some subsoil mineral wealth, then the question can be truly grave. What is the relative value of a raw material and an indispensable technical process? Does the undiscovered oil pool lying 8,000 feet below a desert constitute 'real wealth'? Is the technical-assistance policy to be one of giving hybrid seeds to peasants or is

it to be that of giving patents and capital for the construction of a plastics factory which will utilize agricultural products to their maximum?

Policy Problems: Control of Human Resources

It is obvious that the utilization of human resources is probably the most important of the moral issues in which technical-assistance policy is involved. It touches upon every aspect of any programme. Who is to benefit? Who shall work and under what conditions? What will be the result of the technical-assistance project on the patterns of population?

The ultimate consequence of assistance is to alter basically social conditions. This may involve incorporating woman-power into productive employment. It may delay the marriage age. It may settle nomadic and urbanize rural populations. It may introduce health measures and increase life expectancy while decreasing infantile mortality. It may encourage intensive land utilization and make large families profitable, or it may encourage industrialization and make large families expensive. One set of measures it introduces may be working in opposition to another set. If the foreign donor agency is to be realistic it must face the question of its moral right to tamper with demographic patterns. Does it have the right to supply birth-control techniques in a non-Christian Oriental nation which requests them: yet not have the right to supply the same techniques under similar circumstances in a Roman Catholic nation which opposes them? Should it introduce programmes that it knows will rapidly increase the population of an under-developed area beyond the power of that area to support it, without simultaneously insisting upon economic changes which will correct the trend?

Conditions of Success

Whilst these general questions of policy should be asked, answers which apply to all programmes of development cannot be given. The circumstances of each, though showing similar features, differ considerably in detail. So often factors suggesting the possibility of successful economic and social development are opposed by equally powerful ones militating against it. Thus, whilst one of the objects of analysis is not only to ask the pertinent questions but to state as precisely as possible the conditions for the success of the process, no claim can be made that the contents of this volume will provide a formula for success.

Yet some attempt might be made to indicate the conditions under which successful programmes have and are taking place. That the development of one aspect of a country's economy can produce results is abundantly clear from the article on Aramco's educational programme. Here the conditions are unique. The very reality of

immense economic rewards through the winning of oil apparently makes the other factors of minor importance. For with vast underground wealth, relatively easily obtained when advanced Western oil technology is used, the possibility of raising the general standards of living, accumulating capital for further social and educational development is shown. So many of the economic problems of development described by Dr. Singer are solved and the questions we have asked, answered. The area of development is obvious; what other could indeed be suggested or chosen? The donor, providing the technical skill in a country unable to provide it, is in a position to dictate actual technological development plans. (Whilst at the same time, it should be noted, cautiously avoiding direct participation in the general educational development of the country.) The returns from immediate development are so rapid and prodigious that a choice between this and long-range social advancement hardly presents itself. The one so easily follows the former. The questions of organization, whilst presenting problems of detail, are answered in general terms without difficulty. The expertise must be supplied by the assisting country. Almost equally inevitably large numbers of semi-skilled and unskilled workers have to be found locally. The problem resolves itself into one of finding methods of training these skilled and semi-skilled local workers.

Many other questions of policy find a ready answer here. Yet the economic factor should not be regarded as of over-riding importance. Examples can be quoted of countries equally rich in natural resources whose programme of economic development is bogged down through political considerations. Thus it is of value to note the social conditions Saudi Arabia which make this development possible. Here, in a new nation, live a handful of nomadic tribes held together by a common religious culture and an all-powerful—if enlightened—monarchy. Lay education is not widespread, nationalism in the sense of resistance to outside assistance is not well-developed. Yet the general culture, springing from the same Middle Eastern background as that of the West, is not antagonistic to technical development. The test perhaps will come when national prosperity has brought wider contacts with the West to more of the local population; if and when the flame of nationalism has been fanned and when the inhabitants—perhaps hardly recognizing the great benefits that Western technical aid has bestowed—feel jealous of the economic rewards enjoyed by foreigners for that aid. For under these conditions greater value is placed on the raw materials than on the indispensable technical knowledge required for their development.

Other examples of how development under all-powerful governments can proceed are also given. Where governments, despite popular protest, have been determined to push through programmes of development in selected areas, economic and material improve-

ments have followed but the social consequences have sometimes been disastrous. In their searching for incentives to maintain the morale and sustain the efforts of their people under conditions of hardship and deprivation, the Japanese leaders found nationalism and militarism. The task of democratic governments, sensitive to popular demand, anxious not to place on their people the deprivation often necessary in an economy lacking immediately realizable resources, is more difficult. The pressure in India to spread development programmes horizontally rather than to concentrate the efforts in selected areas is clear. The article from Mr. Saiyidain and Dr. Shrimali also shows the importance placed on winning general support for the programme there. If education can play a direct and useful part in the process being carried through by democratic governments it is to make plain that the well-being generally demanded can be achieved only through increased endeavour, greater production, longer hours of work for, in many cases, the same financial rewards.

Resistance to this kind of education is found where suspicion of the motives of the country providing aid is already aroused. In Dr. Tibawi's article the decision of Syria to proceed without foreign assistance, despite the obvious retardation of the process, serves to illustrate the point. The anxiety of the British Development Corporation to make clear that it proposes in the not too distant future to 'sell-out' some of its projects to local peoples indicates further that one of the necessary conditions for successful development is the firm belief of the peoples of the developing country that the fruits of development will be theirs.

If the economic and political conditions favourable for development are reasonably obvious, no criteria—in the form of answers to the policy problems we have stated—in the ethical-social fields are clear. Yet in many of the articles the resistance factors to technological development in terms of social patterns emerge. Dr. Raum analyses them in African society, for example, and in Miss Camilla Wedgewood's account, *Papua and the Trust Territory of New Guinea,* are found conditions so difficult to reconcile with a new technological society that the future adaptation—despite the efforts of the Administration and voluntary agencies—of the natives "as individuals and as communities to their new environment" is uncertain. Here indeed, many of the economic, political, and social factors come together—in marked contrast to Saudi Arabia—to resist technological development.

The ethical conditions for success are equally difficult to define. Analysis of the possible solutions is made by Western, Near Eastern, and Indian philosophers. The diversity of their outlooks—as well as their points of agreement—reveal the fundamental difficulty of answering the problem in general terms.

In these two fields particularly, education as a process of enabling

cultural transmission and cultural change to take place harmoniously is of immense importance. Educators of both the receiving and donating countries should study carefully the unique problems associated with this dual task. What is to be retained, what is to be modified, and what of an alien culture can be added without meeting violent opposition so that the whole process of development is not brought to nought by prejudice, suspicion, bad faith, or righteous indignation?

These considerations seem relevant in educational planning; not as a *panacea* but as an attempt to make clear the questions which might be asked and to draw attention to some of the answers—however qualified they might have to be—found in the accounts presented as case-studies in this volume.

The Planning of Cultural Change

It is a feature of the twentieth-century revolution that questions like the above have to be considered at the international level. After all, the Industrial Revolution in North-West Europe and North America was planned by no one. It was the work of indivduals seeking their own profit. The concomitant social changes were not foreseen—they happened accidentally. When difficulties occurred, such as extreme poverty or the exploitation of child-labour, new institutions were set up to deal with them. But the on-going Industrial Revolutions in Asia, Africa, and Eastern Europe are very largely initiated, directed, and nourished by governments or other large agencies. Experience has taught us what results may follow, and measures are often taken in advance to minimize harmful effects. In spite of this, industrialization is certain to bring evils in its train, and these will be all the worse the more rapid the process. The successes gained in the Soviet Union were achieved only by a ruthless planning and a disregard of individual rights.

In the last two hundred years the whole world has come to realize what sort of contribution schools can make to economic and social change. When Peter the Great decided to develop shipbuilding and sea-borne trade in Russia he thought it sufficient to take back with him from England a few schoolmasters and craftsmen. When the rulers of the Ottoman Empire in the first half of the nineteenth century decided to build up a modern army, they concluded that a few military colleges would be enough. However, when in 1870 the group that had obtained power in Japan decided to modernize their Empire they realized that bigger and more complex measures than these would be necessary. They realized that a process of cultural transformation involves careful planning of cultural transmission. State-directed economic revolutions need almost total planning of entire educational systems.

For, as we have insisted more than once in this paper, the process of industrialization means much more than the learning of simple

skills. Industrial mass production, as practised in the West, is the outcome of the functioning of a particular kind of society. The skills needed are not merely skills of hand nor even of brain; they are also social. They are habits which are supported by attitudes, traditions, and modes of feeling. What is involved in all this can be gathered from the researches of anthropologists. A rather extreme example is to be found in a book by Jack McLaren, an Australian writer whose wit often disguises, while it adorns, acute observation and wisdom. He describes his attempt to start a plantation on Cape York Peninsula.[2] Of course, the natives here are among the most primitive and backward human beings on earth: there is no resemblance between Northern Australia and the countries considered in this YEAR BOOK. Nevertheless, certain points in general significance are brought out in McLaren's story. He selected as his helpers some strong and seemingly intelligent men and persuaded them to set to work.

> And now I encountered my first real difficulty, a difficulty indeed which in all the years I was there I never wholly succeeded in overcoming. It was that of teaching the natives the use of European tools. As people accustomed to the implements of the Stone Age in which they lived, implements such as a saw, chisel, hammer, and auger were completely beyond them. Though they were quick to grasp the purposes of these tools, they were exceedingly slow to learn to use them effectively and without damage. Even the most intelligent was liable to buckle a saw within two minutes, the repairing of which would cost me, maybe, a full two hours' work. In fact half my time was occupied in repairing damage caused by my well-intentioned Palaeolithic carpenters.

And so McLaren goes on describing his troubles. The natives would not rise in the morning: they preferred to sit about till late at night gossiping and dancing. The cultural pattern forbade anyone to waken up a sleeper—for when a man slept, his spirit left his body and it would be excessively bad for him to wake without it. They took an infinite time over their meals. They very quickly got tired. They left their jobs on the slightest pretext. If left unsupervised for even a few minutes, they went to sleep. In a word, their total output was very small not merely because of the difficulty they found in handling tools or equipment, but because all their attitudes and behaviours were attuned to a mode of life utterly different from that of an industrialized people. They had not learned the disciplines and habits, the self-control, the time-consciousness, the drives which our own babies pick up from their parents or our youngsters learn in the elementary schools. And who was to teach them? In fact, is it really possible to change a cultural pattern according to a pre-established plan?

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[2] Jack McLaren, *My Crowded Solitude* (Quality Press Ltd., London, 1946).

Certainly, decisions can be made to assist a certain process of transmission, to adopt a particular innovation or to reject another. The trouble is that unexpected social by-products inevitably disturb expectations—a sad fact familiar to reformers everywhere. Nevertheless, faith remains. Societies are modifiable and perfectable. To some degree, man can control his destiny. When he is presented with alternatives he can determine which is better. We believe, too, that an intensive study of a cultural pattern makes it possible to set up desirable goals and to select appropriate means for their realization. We believe that all education involves making value judgements and it is thus moral in nature. We believe that economic issues inevitably influence educational choices, but also that the psychological and anthropological patterns of a society limit and determine these choices.

What is needed is a perception, on the part of those who shape educational policy, of the very great complexity of their task; a realization of the fact that their actions will and should affect every aspect of life. In the third part of this YEAR BOOK, under the general title *Planning and Education*, we present a few examples of this fact and we have deliberately chosen some, like TVA or the Zuider-Zee project, from advanced economies to show that even here problems arise which, at their own level, are of one piece with modernization.

If foreign agencies are assisting in the process of transformation, they too have to take account of the side-effects of their actions. An overseas training programme, for example, can return thousands of university graduates to an under-developed nation, yet can utterly fail to solve its needs if they have been selected from parts of the population which are antagonistic to the predicted social change, or if they have received training which does not meet a need in their emerging economy, or if their contact with the foreign culture disturbs and unsettles them for return to their own society. And an industrial training programme which concentrates upon specific techniques may provide the personnel for markedly increased production, but it will make the total technical-assistance programme fail if it regiments the workers and stifles leadership.

Educational Statesmanship

A philosophic perception of the more remote consequences of educational action with a judicious weighing of alternatives are the marks of statesmanship. Popular clamour and pressure from self-interested petty politicians may often lead to policies which will fail in the long run while attractive at first sight. And it is precisely here that leadership must come in, so that the people may see where their true advantage lies.

In the first place, it is essential that the policy makers should be clear regarding aims. For example: if Indians decide that Mahatma

Gandhi's ideals of the development of rich community life in the villages and the fostering of local hand industries is right, the pattern of their educational system will be different from what it would be if the aim were the rapid adoption of modern technology. There is a danger, too, in being over-ambitious. It is probably unrealistic to expect that Indians or Chinese will attain in the next twenty or even fifty years the degree of material prosperity enjoyed by Americans, but quite possible that they will by then catch up, say, with the agricultural nations of Europe. Again, human resources are scarce everywhere, but especially so in under-developed countries. The number of well-educated men and women is small: should this limited supply be directed towards teaching, towards medicine, or towards industrial and agricultural production? If this last fails to grow, the first will lack proper support. But again, unless educational facilities are provided, how can industry prosper? Actually, far too little is known regarding the relation between economic and educational planning—there is here a fruitful field for research. We think with something almost akin to horror of the casual way in which great educational plans, affecting whole countries, are framed. Usually less attention to detail and fact go into them than, say, into the building of a small warship or into the equipping of a minor factory. And nearly always prejudice and blind tradition drive out reason, research, and realization. Here less wishful thinking and more thinkful wishing is needed.

The difficulties of wise policy-making are aggravated by the two great but often distorted passions of the modern world: democracy and nationalism. Without both, nations would have gained neither freedom nor unity. But the price paid is often stultifying.

Egalitarian democratic feeling often expresses itself by a clamant demand for the immediate establishment of universal compulsory education and for the abolition of all privilege. In practice, this means easy access for all to secondary and higher education. Now there is no doubt that such provisions are wise and economically rewarding: if the resources in teaching personnel and buildings can be provided. It might be profitable to irrigate a desert, making the whole of it fruitful. But if there is available only a little water, which is best: to irrigate only a few acres or to spread it over the entire thirsty area? Europe was fortunate. It built up its educational capital slowly over the centuries, restricting the small amounts available to privileged classes. And this was accepted by the masses, who saw the will of God expressing itself by this inequality. But when the time came for quick growth, there were in existence colleges and schools which were capable of training the great numbers of teachers necessary to staff new institutions. This was true of Russia, too, and it may be true of India and the Middle East. In many under-developed countries, however, it is not, and there exists a real danger of a great disappointment in the years to come.

Very often the populations of these countries cannot exist at all without the economic contribution made by child-labour. How, for instance, are small children best employed in countries like China? Should they gather sticks for fuel and help to cultivate the fields? Would it really be better for them to learn reading and writing while going cold and hungry? Wise policy-making will express itself here by the laying of plans of educational development which apportion resources rightly between the various levels of education, paying attention to the paramount need for selection, training of leaders and of professional *élites*. It will express itself, too, by the degree to which it endeavours to consolidate progress and change achieved, by plans for the provision of public libraries, museums, and all other agencies of adult education.

The difficulties that come from exacerbated national feeling are even more puzzling than those created by misdirected democratic ideals. Language problems are a good example. For instance, from the economic point of view India stands to gain from a widespread knowledge of English, which is helpful in commerce and which is the key to a very rich technical and scientific literature. Yet the standards of teaching this language are falling rapidly and its importance in the schools is diminishing. Worse still: many areas of India are now beginning to ask that their own regional language take precedence over the federal language, Hindustani or Hindi. Success here would actually hamper the growth of prosperity. And what of the attempts made in many countries to foster the learning of languages which were dying out? Is it always wise to invent alphabets and to provide literatures in primitive languages? Are we certain that the adoption of this policy in some regions of the earth was the result only of an unselfish desire to foster culture and not at all to the application of a divide-and-rule policy?

Again, it is obvious to all that developments in the newly independent nations of Asia would be facilitated if more Western aid and supervision in education were provided. But national feeling will not allow it: such help has to be carefully controlled and hedged about. In many countries even immigration is now looked upon with disfavour. Yet it continues to be of importance. For instance, the contributions made by the Jewish refugees from Hitler's tyranny greatly benefited Turkey and South America. Israel itself is a nation which is at the moment possibly the most erudite in the world and which has an unprecedented concentration of skill. Far from being poor, this young nation has an investment in training so great that it cannot profitably exploit it to the full.

Cultural Change and Education

What has been said makes clear that what is needed is the creation of a theory of education more complex and relevant than anything available. Our hope is that this Year Book will be an

acceptable contribution towards the formulation of this theory, and our plan has been to present special papers by expert contributors illustrated and expanded by case-studies dealing with specially significant areas and problems. Where opinions are sharply divided, a contribution from both sides of the controversy has been sought. The first section deals with *Aims, Objectives and Implications,* and is, we believe, of pre-eminent importance. As has been argued above, it is not in the details of production techniques and educational methods that technical-assistance or community-development plans fail, but in the establishment of their fundamental philosophy. The second section, *Cultural Change,* examines the laws of social change and the problems of the social setting in which development-programmes operate. This expresses our belief that anthropology and sociology are the ancillary sciences which above all have a contribution to make to the new theory of education we look for. We think, too, that at each of the levels we have included, education and schooling have a vital part to play. Instrumentally—schools can do much to induce nomadic tribes to settle in one spot, they can help to bring remote tribes into contact with a richer and more advanced culture, they can provide useful knowledge to peasants and help them to meet their needs. And culturally, too—education can do much to stabilize the emotional and social life of human beings who are disoriented through the breaking up of habitual patterns and who are more or less lost in a strange new world. It will be noted, incidentally, that in this section on *Cultural Change*—as in others—we have deliberately mixed examples from very backward areas with others from advanced industrialized countries. For the whole world, in truth, is experiencing the impact of the ongoing economic, social, and cultural revolution. We are all, to some degree, men of two cultures immersed in the past and yet facing the atomic age. We have included, also, one historical article on Meiji Japan, because it tells the complete story of an important and successful case of cultural transmission.

There is little need to say much here about the other main sections. Our intentions and hopes will be clear from the general plan and list of contents, except perhaps as regards the last part. Here the *Impact of Western Culture* is critically examined. And in this same section the problem of social evaluation of the results of technical assistance is also considered. The reporting of results achieved by a given programme has unfortunately frequently been both inadequate and doctrinaire. A public-health team has reduced the mortality at childbirth or greatly lowered the incidence of malaria in some relatively unimportant village or isolated mountain valley. An anti-illiteracy team has taught a certain percentage of the adults of some tribe or area to read. Often the importance of these achievements is grossly inflated. Sometimes the implications for the final goal of technical assistance are badly misinterpreted. The cost of

such a programme must be considered: for with unlimited capital almost any result may be achieved. Green vegetables, for example, can be grown on the sterile surface of a concrete slab. Yet unless the process becomes self-supporting it will ultimately depress, rather than raise, the material standard of living—or alternatively demand continued assistance from some paternalistic outside source. But even if the programme can be financed, can be expanded to a large-scale endeavour—and can produce the immediate results claimed—this does not necessarily constitute an unqualified success. An adequate evaluation must measure the impact upon social and political life, and their relation to simple indices of economics, health, and education. But the final evaluation can come only from those persons whose burden has been lightened and whose society has been altered. How well has the programme achieved their dream of a better life?

THE EDITORS.

SECTION I

AIMS, OBJECTIVES AND IMPLICATIONS OF TECHNOLOGICAL DEVELOPMENT

In the areas of Asia, Africa and parts of Latin America to which, in this volume, attention is directed, technological development is to-day almost inextricably associated with technical assistance programmes. Where these fail is not so much in the details of technique but in the establishment of their philosophy. There are treated in this section, therefore, three fundamentally important subjects: the social and political objectives of technological development; the economics of technological development; and its moral and ethical implications. The section has been placed first in recognition of its pre-eminent importance. It was planned to provide a frame of reference within which the whole volume might be studied. The authors, who are not primarily educationists, bring to their discussions specialized knowledge and experience from their particular fields of interest; from politics, philosophy, economic theory and the study of international relations. Many implications of vital significance for the educator emerge.

For the thing which is novel in the educational aspects of technical assistance is the creation of a new and more complex philosophy of education. Primary in this is the establishment of a new educational goal: one which is acceptable to the donor and the recipient, one which stands the scrutiny of international public opinion, and one which defines a new and better life. Accompanying this new educational goal is the need for a relevant and realistic theory capable of directing practical effort towards the selection and invention of appropriate means to that end. From the fabulously rich educational experiences of all countries could be selected those practices which most effectively, most economically, and most consistently achieve the desired social goal. This is a challenge of the highest order to educational statesmanship.

No pretence is made of presenting the final answer. By the very nature of the problem there can never be a final answer. But here and elsewhere in the volume an analysis of the problems involved is given; discussions which assemble world opinion are provided. Where opinion is sharply divided, where there are different

approaches to the same problem, contributions from both sides have been sought.

Professor Manning, for example, distinguishes between the 'objectives' of technical aid and the "motivations propellant in the framing and following out of the policies involved". The impact of Western technology, involving the introduction of "Western ways into non-Western societies" is examined. Philosophers representing both those areas providing technical assistance and those in which rapid or recent technological development is taking place consider its ethical and moral implications. Professor Northrop presents the view of a Western philosopher, and Mr. Basu that of an Indian philosopher. Dr. Malik's article, in which the implications for the Near East are discussed, is part of one published in *Foreign Affairs*.

THE EDITORS.

CHAPTER ONE

SOCIAL AND POLITICAL OBJECTIVES

It is well at the beginning of this article to make clear the broad aims of British Colonial Administration before discussing technical developments in other fields. Those aims have been endorsed by a succession of British Governments, and to-day there need be no lingering doubt anywhere as to the purpose of British policy. Britain assisted in writing Chapter 11 of the Charter of the United Nations and by her membership of that international organization accepted the objects of policy in non-self-governing territories as set out in the Charter. In effect, Britain said: "We recognize the principle that the interests of the inhabitants of these territories are paramount and we accept as a sacred trust the obligation to promote to the utmost the well-being of the inhabitants and to this end to ensure their political, economic, social, and educational advancement, to develop self-government, to take due account of the political aspirations of the peoples, to assist them in the progressive development of their free political institutions, to promote constructive measures of development, and to encourage research." Much more is included in the Charter, and all colonial powers in membership of the United Nations have endorsed these objects. The Charter was a remarkable international declaration of colonial purpose and an important product of the Second World War of 1939–45.

British Policy

British policy has been reinforced by other official announcements since. One often-quoted statement runs as follows: "The central purpose of British colonial policy is simple. It is to guide the colonial territories to responsible self-government within the Commonwealth in conditions that ensure to the people both a fair standard of living and freedom from oppression from any quarter." The present Secretary of State [1] has accepted this view. "It is not intended," he said, "to change the two fundamental aims of policy that have been accepted as being above party politics. These are to help the colonial territories to attain self-government within the British Commonwealth and to pursue the economic and social development of the territories so that it keeps pace with their political development."

[1] The Rt. Hon. Oliver Lyttelton, Secretary of State for the Colonies since 1951.

These aims mark, over the past fifteen years, a new emphasis in colonial policy. It is true that the idea of self-government had been affirmed in the early colonies of settlement of the First Empire and, later, Burke had fashioned the conception of trusteeship. In the course of time the European colonies blossomed into independent nations, but the non-European colonial territories were, for a variety of reasons, slower in making progress and less adaptable. Their constitutions remained less liberal and their development was largely neglected. Some perplexity arose from time to time when conflicts of interest occurred between settlers and local populations, though the philanthropic movements in the nineteenth century helped to encourage a more human sentiment towards native peoples.

If the more enlightened in Britain regarded themselves as trustees, there was no great constructive effort to build up the colonial territories, and colonial administrations did little more than establish the rule of law and maintain good order. With their limited revenues they built roads, ports, and railways while enterprises came in to work minerals or cultivate crops where they could be easily and profitably exploited. In fact, most colonies were eager to do their best without much direct interest by the government at home. They were at a discount in the mind of Parliament.

Until this century, the old notion of colonies existing for the material advantage of the 'possessing' power persisted. The native peoples of the colonial territories were subject to political and economic domination and their communities were scarcely thought of in terms of human societies with rights of their own. Occasionally there were a few spurts of interest in Britain in economic construction and commercial development, but education and dispensaries were left to the missions, political interest to the embryonic legislatures, and production to any enterprise prepared to take the risks. The colonies, in any case, had to be self-supporting, with as few subventions from Britain and as few worries for the government as possible.

There was substance in the analysis of colonialism made by a number of economists towards the end of the last century and the beginning of this. Industrialism wanted raw materials, markets, and fields of investment for wealth derived, in part, by under-consumption at home. Britain wanted cheap food, cheap and accessible raw materials, and cheap labour for getting them. In places, native lands were alienated and discriminations introduced. In great populated regions native society felt the impact of Western ideas and economic demands, and the process of disintegration of native society began. Undoubtedly, the break-up of tribal life and the diminished strength of traditional institutions brought distress and dislocation. The price of this *laissez-faire* policy was intense poverty, widespread disease, and profound ignorance in the populations. Before the Second World War, however, Britain was reminded in a series of reports on disturbances in the colonies of the

squalor and misery in many of the dependent territories because of their under-development and irrational economies. Labour was seen to be inefficient, marketing was uncertain, local economies were unplanned and wasteful, and social standards were deplorable.

It was in these circumstances that colonial development and welfare became a much more active idea in British purpose and administration. While self-government could be said to be our ultimate colonial purpose, it was now clear that its attainment was insufficient in itself and indeed was dangerous if it found the colonial people unprepared because social and economic conditions could not sustain political independence. There was also a cold wind beating in on the colonial powers created by the sentimental and often unrealistic criticism from non-responsible powers. Scepticism was expressed by nations which themselves had rejected colonial status in earlier years and which had been encouraged by a new impetus in Asia and Africa of nationalist feeling and political freedom. In any case, it was not easy for Britain to rebut, in international gatherings, charges of neglect and indifference to trusteeship and social responsibility. It was obvious, too, that there were immense economic and social advantages to ourselves and the world, as well as to the colonial people, if the under-developed countries could be built up and developed in a planned and orderly way. In nearly all the colonies a great effort seemed called for, to improve the education and housing of the people and to establish services which could control disease, prevent ill-health, and raise the low standards which afflicted the people. The territories were in need of every kind of utility and public work—buildings, roads, bridges, ports, communications, railways, as well as of irrigation, fuel, power, transport, water supplies, soil conservation. To equip and improve their life so that these countries could jump the centuries and enter the modern world became the preoccupation of government. Such a policy would involve considerable capital and expenditure, numerous techniques and skills which were in short supply and, in addition, a continuing heavy expenditure to maintain the services established and which in the long run would have to be provided from local sources. Whatever help might be forthcoming from Britain, it was imperative that the natural wealth and resources of the territories should be developed. It was an imperial responsibility that the colonies should become viable, self-reliant, and independent.

Economic and Social Problems

As we have noted, the economies of most of these countries were hopelessly inadequate; they depended for their food on primitive agriculture; there were very few industries; much capital had been risked on what had proved to be wasteful ventures and too little capital had been invested in development and utilities, in mining and better agricultural production. Public and private enterprise

were small, and labour, fuel, good soil, and water were scarce, as well as technical skills, transport facilities, capital, and assured markets for surplus crops and raw materials. In many areas nature and environment were uncontrolled; people suffered from drought and famine, disease and pests, appalling ignorance and vicious customs. It was difficult to plan, in the absence of almost all that contributes to civilized living, or to determine what projects and services should be brought into the ten-year programmes which colonial governments were asked to make when the war neared its end.

The programmes which emerged after the war were made sufficiently elastic to meet the changing conditions of the world. Economic development was basic to welfare, but effective economic activities depend on education, social services, and public appreciation and co-operation. It is not sufficient to attempt to improve agriculture, to introduce new industries, and to extend mining and public works unless there is a corresponding development in social life and education and training. Programmes of projects for development were therefore balanced as between social and economic requirements in the light of local conditions; training in the skills and techniques needed at all levels over the whole of national life was recognized as of the first importance for constructive advance. It was also important that there should be more research into the baffling problems which beset social, economic, and political development in these countries. Greater opportunities, too, would have to be made available, and local facilities improved, for secondary and higher education in the arts, sciences, and technologies. Another primary requirement would be topographical surveys of each colony and, in addition, a rapid geological and water appreciation to guide further economic development.

It may be that the motives for supporting this new policy were not always single-minded. I believe, however, that it can truthfully be said that the policy represented the response of a liberally-minded Britain to colonial needs once that public had become conscious of them, and provided the sacrifices were not too heavy. A stagnant policy, in any case, was out of the question in the pressures and influences of the post-war world. The aim of government was emphasized as a positive policy of social and economic construction to keep pace with the move to greater responsibility which the political awakening of subject peoples in most colonies was bringing about. It has since been criticized that Britain has been less generous than the funds voted to assist the colonies would seem to suggest, and that the preservation of a healthy sterling area and balance of trade has prejudiced the prosperity of certain territories. Be that as it may, in spite of the limits set in the colonies by shortages of dollars and of the materials required for development, remarkable works have been built and considerable social headway made.

The total contributions to the colonies are much larger than the total sum voted by Parliament under the Colonial Development and Welfare Acts. Moreover, the cost of the schemes under the Acts involves the colonies in double the amount received by them from Britain. The figures showing committed expenditure by Britain under the Acts as from April 1st, 1952, to March 31st, 1953, are indicative of the post-war effort at social and economic reconstruction since the war (and to these figures other schemes and amounts must be added); the figures are:

Physical planning, surveys and census	£5,600,000
Communications	£15,700,000
Economics: development of	£21,000,000
Social (medical services, education, housing, etc.)	£48,000,000
Colonial service training schemes	£1,600,000

These are only the principal groups of expenditure. The West African territories were allocated £26,000,000 towards their programmes; East Africa £19,000,000; Central Africa £6,500,000; Caribbean £20,000,000; South-East Asia and Hong Kong £7,700,000; and Mediterranean territories £4,800,000.

All this suggests an effort to set the colonies on the road to political responsibility with the physical apparatus and minimum social services required to 'prime the pump'; to lay foundations and to tap new revenue and local resources. The policy was, in fact, no more than ordinary political prudence. A nation offering leadership in international relations, concerned with the values which the Commonwealth proclaims, anxious for internal security and social progress in all parts of that Commonwealth, desirous of tying the dependencies in loyalty and goodwill inside the Commonwealth, could not now neglect to urge policies which promoted social well-being and political freedom. Such policies, moreover, would help defeat social anarchy and prevent disturbance, would probably check the advance of illiberal doctrines of totalitarianism, and generally open out the prospect of creative democratic self-government. The policy was not a reply to the temptations of communist propaganda but the logical development and application of liberal ideas.

Other aspects of this policy might appear less disinterested. The tropical and sub-tropical areas of the colonies possess valuable mineral deposits and are capable of producing important foods and other agricultural crops which have become indispensable in our modern civilization. In these areas science and orderly development can raise the low standards of living and add to the material well-being of the world. Many years ago Lugard reminded us of this dual mandate—our responsibility as a colonial power to the colonial people and our responsibility to mankind. This policy represents no 'double-talk' to cloak a new phase of economic imperialism. The Western world has education, culture, technical progress, medicine,

to offer; the colonial people want these things as well as the materials with which development is built. With their products, their crops, minerals, and raw materials, and with the commodities we want for our table and industries that are surplus to their own requirements, they can buy the things they want. In short. we want foods like tea, coffee, cocoa, fats, and materials like rubber, sisal, timber, pyrethrum, tin, copper, gold, and diamonds; the colonies in their turn want cement, steel, textiles, transport, and other consumer goods, besides the professional and technical personnel which are essential to train, guide, set standards, and play their indispensable part in all economic and social progress. The colonial people can advance only by such provision, and the more they produce and market the greater their prosperity and that of the outside world. These ideas need, of course, some qualifications, but broadly they indicate the thought which lies behind many of the projects of colonial development. There was, for instance, a demand in the world for more edible fats when the government enterprise in groundnuts in East Africa was launched, but there was also occasion for finding an answer to the sterile wastes of that region so that the hunger of the increasing population of Africans could be satisfied, their demand for health and education met, and sub-marginal lands made fertile and productive by the discovery of new methods and techniques in cultivation.

There have been other changes of emphasis in colonial policy. The approach to economic enterprise in colonial areas is less frankly materialistic and predatory than it was. Some private interests still think, perhaps, in terms of cheapness and profitability of production, and have their eyes fixed mainly on their own gains with little regard to the social consequences of their economic activities or the contribution they can make to the life of the colony with which they are concerned. But the old conceptions of empire and imperialism have undergone a change, and in every dependency there are regulations and legislation and some degree of planning and control of economic activity. In addition, more and more colonial people desire to order their own affairs and enjoy the strength of good social standards and economic viability; the sooner they can stand on their own feet and exercise the responsibility and equipment of nationhood, the greater will be the stability and security of the world. Moreover, the conflict of the predatory interests of clashing imperialisms (which in the past has been a chronic element in causing war) can best be removed by the development of territories which offer crops and materials wanted in the modern world. War has taught us the importance of strategic materials; the cornering of them is a cause of resentment among nations without ready access to them; the world, therefore, will be a steadier place to live in when the gaps of under-development are filled and the status of colonial people is replaced by independence and responsible nationhood.

Much can be said about the various materialist motives in empire-building and its bad effects on native peoples. But the economic motive in imperialist ambition has not been wholly bad, and it has contributed to the development and progress of many overseas territories. The pursuit of commerce and trade and the search for commodities and markets have played an important part in the progress of mankind. To-day these activities are no less valuable and mutually beneficial to colonies as well as to more-developed countries. The urge to develop undeveloped countries in order to enrich mankind is therefore laudable provided the colonial people concerned understand, endorse, and co-operate in the changes. Their opposition is to the exploitation of their weakness and the filching of their wealth. They learn to appreciate that the use of technical skills is a speedier way of winning the conditions they want than reliance on the slow, old-fashioned practices of their traditional life, and that it is folly to resist the new ways if they want freedom from want and disease and the education which gives the colonial administration its power to change environment and secure social well-being. The penetration of economic interests may cause a great deal of social injury but it can be directed and, in the long run, be made to bring advantage to the people concerned in lifting them from the primitive drudgery and oppressive practices which have condemned them to their wretchedness.

I have already referred to the importance of technological skills in advancing democratic responsibility in the colonies and resisting Communism and Fascism. Ideological considerations for pressing on with development are especially important in a world where political freedom and the values of our modern civilization have been seriously challenged over the past forty years. Democracy has already experienced many casualties and has suffered grievously in the struggle with totalitarianism, and can hope to survive only if men are able to experience freedom and enjoy the conditions of good social living. The perpetuation of ignorance and human misery offer the conditions in which pernicious ideas tend to grow. We cannot afford to tolerate indifference to economic conditions in which the doctrines can thrive which destroy our values and deny us liberty. Our dislike of totalitarianism and oppression has entered increasingly into the motives for building speedily the social and economic life of the territories within our responsibility. It is fortified by philanthropic motives which have been present for over a century in influencing colonial policy and which have strengthened the sentiment of humanism and good neighbourliness in our dealings with native peoples. Their welfare and development are matters of concern.

Administration

These, then, are some of the motives which have brought Britain

to the task of fulfilling her trust to the colonial peoples and which are involving her to-day in service to people who, before her mission is barely completed, will probably demand complete autonomy and may repudiate the relationship with Britain altogether. There is, however, no going back on our tracks and giving up the responsibilities which are our legacy from history. That constructive work already makes heavy demands on us, and urges us to press on with the technical development which our colonies desperately need. There are practically no fields of public policy in the colonies where technicians and highly trained and experienced personnel are not needed. They are indispensable in the theoretical and practical considerations of administration. As our conception of purpose in the colonies has grown, so the necessity of people with expertise and experience has increased. The functions of government have multiplied, and new conceptions of the responsibility of government have replaced the old. Colonial policies are concerned with human beings and human needs in a large way, and in most colonies the activities of government not only involve the primary and simple duties of government but also the practical responsibilities of the economic and social life of the whole community. A great network of departments is engaged in a vast variety of activities concerned with forests, agriculture, live-stock, water, public works, research, social welfare, communications, industrial development, labour relations, co-operative practice, and information. There are many more subjects, and though some of these departments are still rudimentary they continue to grow in activity and interest. The need for trained advisers and experienced workers to man them becomes immense. No new policy can be initiated, no new scheme of development made, no important improvement in economic life inaugurated, without them. And what is true of public life is also relevant to all private endeavour. In surveying, mining, transport, soil conservation, control of pests, generation and distribution of power, and the establishment of new industry, there can be no progress without the men who have the 'know how' and those who have technological training and experience behind them. Today, projects are abandoned and development stultified by the shortage of, or inability to obtain, such men.

The place of the geologist illustrates the problem. His knowledge is of basic importance in development. The 1945 report of the Colonial Research Committee pointed out that geological survey is by no means valuable only for the exploitation of colonial mineral resources. It is the basis for social surveys and thus for the application on a grand scale of the great advances in soil service. Such surveys render possible the systematic estimation and exploitation of underground water resources, a matter of great importance for many areas which enjoy only an inadequate or uncertain rainfall. Similarly, they say, with topographical surveys. Thus, the work of the geologist is essential in mining, in agriculture, in community development. It

was one of the early post-war efforts of the British Government to organize geologists, surveyors, and others into a Colonial Geological Survey Service. The policy has been to expand such a service both in the individual territories and on a regional basis, and thereby obtain systematically the basic knowledge required. A Colonial Geodetic and Topographical Survey Service also became essential for charting the territories. Besides field work, air photography and mapping have been employed and systematic surveying done. These are highly technical services rendering the essential information on which development rests.

The employment of trained personnel on research work is also of considerable importance. Wherever possible research is organized on a regional basis: veterinary and tsetse research in East and West Africa, timber in Malaya, agriculture in Trinidad and East Africa, etc. Some individual schemes are carried out in all territories. A brief review of colonial research by the Central Office of Information recently pointed out that: " These individual schemes demonstrate the wide variety of the work in progress. Economic research schemes range from work on primary products such as rubber, cotton, bananas, sugar, cocoa, vegetable oils, timbers, fresh-water and sea fish, to methods of combating problems such as locusts, the tsetse fly, soil erosion and of improving water-supplies, the use of fertilizers, and methods of food storage. Other research projects dealing with building in the tropics and communications have a sociological as well as an economic value. Sociological research proper includes education surveys, and linguistic, psychological, and anthropological studies—the important work being carried out in tropical medicine embraces research into diseases such as malaria, yellow fever, leprosy, sleeping sickness—and into such problems as improving nutrition standards among people subsisting largely on a single crop economy."

Reference should also be made to development in the field of higher education. The university institutions absorb numerous teachers, scientists, doctors, and other highly trained personnel and now train men and women in a wide range of techniques concerned with social and economic advances. Great strides have also been made in the last few years in the provision of opportunities for technical education in Africa, though the practical difficulties due to inadequate workshops and laboratories, appropriate teaching equipment, the limited absorptive capacity of industry, and shortage of teaching staff have hindered the progress which might otherwise have been made. The Colonial Inter-University Council recommended a system of regional colleges in West Africa to take pupils from secondary schools of a certain educational attainment and to provide vocational or technical training with general education. Already throughout the colonies many such new technical schools have been established. In 1949 an Advisory Committee on Colonial

Colleges of Arts, Sciences, and Technology was set up to advise on the development of regional colleges for the provision of higher technical and commercial education, such colleges to become centres of technological development. Certain of these new colleges have already started their work in West Africa, including the Technical Institutes in Yaba and Enugo in Nigeria. Trade apprenticeship training centres have also been opened in a number of towns.

It is of interest to note the large number of scholarships provided by colonial governments for special training courses to fit men and women for senior posts in the government services. In 1951, out of a total of 4,733 students from British dependent territories studying in the United Kingdom and the republic of Ireland, 1,488 were scholarship students. The colonial governments are more conscious than ever of their deficiencies on the technical side and the indispensability of trained staffs and experts if progressive change is to continue.

A glance at the annual reports of the Colonial Development and Welfare Acts indicates the extraordinary range of schemes and projects which can proceed only if the services of technicians are available. A few examples illustrate the need. Aerodromes have to be improved, anti-malaria schemes of drainage to be instituted, a fruit industry developed, forest rangers trained, a film-production unit started, aeronautical wireless facilities provided, a mountain road constructed, an irrigation and domestic water-supply scheme brought into being, piers constructed, coal deposits investigated, and numerous other jobs necessary in the developing life of the territories. Just recently, for instance, a pilot cattle-ranching project and plans for the development of water-supplies were announced for Bechuanaland. Other development projects in the same territory include geological surveys for improving agriculture and animal husbandry, for control of tsetse fly and swamp and for grain storage. The field of technicians of all kinds is almost unlimited.

International Organizations

So far our discussion has had reference to the British colonies, but the problems of development are similar in big areas of many sovereign states. It has been part of the British case in the discussions at the United Nations that too sharp a distinction has often been made between the needs and conditions of colonies and those of sovereign states when similar under-development and social and economic problems are common to both. Poverty, lack of natural resources, limited amount of capital, absence of techniques and skills are features which present themselves in both sovereign and dependent countries throughout the world. In Asia and Africa the penetration of Western ideas and contacts with scientific advances have profoundly disturbed societies which only a generation ago seemed dormant. Consequently there is increasing local clamour

for education and the techniques and development which distinguish Western civilization.

The policy of 'good neighbourliness' and 'freedom from want' proved one of the inspiring motives of international organization towards the end of the Second World War and gave rise to the creation of specialized agencies which could advise and offer information, provide techniques and training, and assist in improving the life of peoples. The United Nations provided organization and funds for a great deal of constructive work for promoting the material well-being of peoples otherwise condemned to poverty and disease. As the Charter declared: "With a view to the creation of conditions of stability and well-being which are necessary for peaceful and friendly relations among nations based on respect for the principle of equal rights and self-determination of the peoples, the United Nations shall promote . higher standards of living, full employment and conditions of economic and social progress and development." The problems of health and disease, nutrition, food shortage, agricultural improvement, animal disease, soil conservation, fisheries are but a few of the matters which have therefore engaged the time and activity of the specialized bodies of the United Nations. The United Nations Relief and Rehabilitation Administration [UNRRA] pioneered even before the war ended considerable aid for refugees and other victims of the war and did magnificent constructive work in fashioning techniques to cope with the appalling misery and human suffering involved in the wreckage of war. The World Health Organization [WHO], the Food and Agriculture Organization [FAO], the Educational, Scientific and Cultural Organization [UNESCO] came into being to cope with the fundamental problems of the world. The International Labour Office [ILO] survived the war. These agencies have kept the problems of underdevelopment in the worst-afflicted regions of the world under worldwide review, collected statistical and technical information, and have been centres out of which experts could go to give technical advice and aid where needed. The World Health Organization, for instance, has trained local staffs to continue and follow up the work done by the health experts, and UNESCO has provided educational equipment to the shattered and impoverished countries. Of special importance was the erection of the International Bank of Reconstruction and Development in order to help finance development. That institution has also sent technical missions to study and advise on development programmes and to finance them, the latest loan contribution being to the recently announced schemes of development in British Guiana.

Other articles in this volume describe the great and generous efforts which have been made or are being made through Marshall Aid, Foreign Aid, and the Mutual Security Administration, as

well as through such agencies as those which are implementing Mr. Truman's Point Four. There is also a description of the contribution of the Colombo Plan and of the Technical Assistance Administration of the United Nations.

Future Problems

Thus the machinery for helping development in sovereign and dependent countries in the world has grown rapidly in recent years, and with it a feeling of international responsibility and, in the case of the colonial powers, of imperial duty and service. These are formative years, in which experience is being garnered by the respective bodies engaged in assisting the development work which is being planned and done, and in bringing to the spot or creating the personnel required for the tasks. The whole conception of technical assistance, however, presents difficult psychological problems. Besides being a great moral conception of world neighbourliness, it must not in practice impinge on the independence, self-respect, and self-reliance of the nations concerned. In any case, to bring bold, imaginative conceptions into practical schemes of progressive change is extraordinarily complex. It is not only the stimulation of the will to do things that is involved, but also the finding of the means—matters involving resources, knowledge, human psychology. In addition, even if the technicians can be trained and the practical techniques known, there is the larger problem of technology—the application of techniques by technicians in given conditions. A great deal needs to be known of the conditions and background in which special skills can be effectively used, e.g. the prevalence of embedded customs which cannot be lightly disregarded. There is room for a great extension of research in these matters. For in the attempt to build up backward countries we are faced in many cases with problems arising from their social organization and the essential features of their economy—the necessity, for instance, of a revolution in agriculture, its method and organization. The techniques involved are not merely the application of knowledge to agriculture but embrace a knowledge of social life as well. Similarly, with the introduction into a backward country of new industry such as mining or disciplined factory work. It has a most disturbing effect on a vast area surrounding the new enterprise. There are problems of migratory labour, of a different economy, and of disintegrating societies. The technology of health and medicine in under-developed areas presents another such problem.

It is estimated that two-thirds of the world's population live in vast economically under-developed areas. The gap between the advanced and backward countries is becoming progressively wider. The industrially efficient nations, by the very reason of their progress, advance in wealth and higher living standards faster than the under-developed countries, which are hampered by their ignorance

and extreme poverty and increasing population. The higher production of the industrial nations helps them to accumulate capital for yet further development, while the backward regions scarcely pull out from the squalor, poverty, and penury in which they are sunk. The pressure of rising population on static or declining resources in these poor areas threatens a progressive fall in living standards. British economy cannot be divorced altogether from all this. The poverty of these distressed areas damages our markets, and their under-development hampers the supply of the foods and materials needed throughout most parts of the world.

A group of economic experts of the United Nations expressed a somewhat similar aspect of the matter in 1949. They said: "We are of the opinion that the problem of full employment cannot be solved except in the context of an expanding world economy, of which the economic development of the under-developed countries would form the most important single element." "One of the greatest needs of the under-developed countries is for capital and techniques which they require to provide productive employment for their populations. . ." It should also be remembered that poverty and poor standards lend themselves to political unrest and often constitute a threat to peace. The question, then, is one of increasing food production, reorganizing agriculture, initiating industries and mining, providing public works and utilities, encouraging new enterprise, opening out communications and transport, and building, almost from scratch in many territories, national life. For such work the nations of the world might ear-mark a proportion of their capital resources. Basic problems such as how to increase the yield of the soil per acre, how to conserve water, are only a few of an infinite number of questions which can be answered in dependent and under-developed countries by the skills and techniques which need to be brought into use. It is not, perhaps, *new* techniques that need to be discovered so much as the use of what is known and already practised elsewhere, of applying social and economic knowledge already available and making better known the best work now going on. Also of encouraging a great number of relatively small projects whose accumulative effect can be considerable, among which are the services of schools, clinics, dispensaries, sanitation, and pure water. To fulfil all this over vast undeveloped and under-developed countries, the training of technicians of all ranks and skills is called for wherever suitable facilities exist or can be created. A more eager response should also be forthcoming from the nations for financing development. After all, all the nations are in each other's keeping.

A. Creech Jones.

CHAPTER TWO

THE MOTIVATIONAL BASIS OF TECHNICAL AID

THE first idea, that this volume should begin with a contribution on the social and political ' objectives ' of technical aid, was undeniably apt. An alternative suggestion, that the article should rather have a wider scope, to include not the formalized objectives merely but more generally the motivations propellant in the framing and following out of the policies involved, was acceded to, editorially, without overt dismay. How undocile a creature it was so being undertaken to bestride, must presently appear. The rider, *qua* the writer, has never been other than aware that, essentially, his theme was one for guarded speculation and for nothing further. His hope must be that as, so to say, a foil to all the authenticities to follow, the fruits of a moderate deviation from the highroad of the potentially verifiable need do no one any harm.

If only for the abatement of imprecision, the term ' technical assistance ' or ' technical aid ' will be used here with a restricted application. It will not be so understood as to comprehend, though presumably it could do, a physician's instruction of his patient in the uses of a plaster, or even the imparting to an infant by its mother of the know-how on the handling of a spoon. It will not be permitted to cover examples of expertise attracted by a go-ahead government without recourse to the good offices of any other government or of any international body—so that the part played by American technicians in, say, the building of the Dnieper dam cannot count as a case in point. Nor will there be any yielding to the temptation to appreciate, as even remotely apropos, the assumptions and the aims of the great scholarship scheme of Cecil Rhodes. For the purposes of this particular article technical assistance is taken to be a service arranged for by governments or groups of governments or by some international set-up, at the request of the government of some area where it is deemed in short supply. And it figures avowedly as an instance of the ' new age ' phenomenon known to bureaucratic cerebration and designated in official print as Technical Aid—or, for short, TA. *Of course* there was bridge-construction in India under the British Raj. Of course there is the Gezireh irrigation system. Of course the English countryside is crossed by Roman roads. Of course the record of colonial rule, whatever the flag, will always have

been, in part, a tale of technical aid. But hardly with a capital T and a capital A.

Not that technical assistance, even in this non-inclusive sense, is wholly novel. Before the establishment of the UN system there had been UNRRA, whose activities and personality the larger organization was presently to absorb. And before that, in the days between the wars, there had been—why not mention it?—the League of Nations, an agency through which technical assistance was, in one form or another, supplied to a number of states. For there had been Article 23 of the Covenant. And, before that, the memorandum of General Smuts. If there exists any essential difference between what goes as technical assistance to-day and what so went between the wars, it lies perhaps as much as anywhere in the fact that nowadays the term has come to connote a kind of big-umbrella principle having a sort of symbolic precedence in the sympathies of the men of goodwill in every land. Between the wars, as a routine international responsibility, technical assistance was real enough, but as a verbal formula it was not yet becoming quite the thing to conjure with that it seemingly is to-day. The League, with its several technical organizations and discerningly assembled staff, from whose stored experience the later vintage of international civil servants may or may not have cared to profit, is not much remembered now; but a one-time cog in that quiet apparatus may perhaps be forgiven for insinuating here his note of tribute to some of the major wheels. The Salters and the Rajchmans—to recall only two of those redoubtable pioneers—such men, even on the shoestring which was about all they had to draw on, would never be short of assignments in the Europe of those days, or in the Asia either. But the main memorial to the League's achievement in the technical fields is doubtless to be seen in the San Francisco Charter, with its entire passages devoted to those non-political functions of which, with the League in liquidation, the UN was universally expected to become the legatee.

An Unsordid Act

Some questions no doubt there are which admit of a plain categorical reply. What is the destination of a certain train? Or of some passenger inside it? There may even be a single simple answer to why this particular passenger is bound for that particular place. Sometimes, when several are seen simultaneously in action, the behaviour of them all may be explicable in terms of a single 'big idea'. They are the members, possibly, of a team, joining their several endeavours for the attempted winning of a game. The hoped-for victory and the process of achieving it, these, in their case, represent the big idea. But it is not always so.

What one has undertaken in this prefatory essay is, in effect, to take a look, not as from the angle of the pundit with esoteric in-

sights to disclose, but of the ruminating layman, at the phenomenon of TA in general, and to offer some personal impressions as to what it would appear to be all about.

"The most unsordid act in history." That, if memory serves, is what he called it—'it' being America's launching of the process of Lend-Lease and 'he' being, as then he was, Mr. Churchill. It may be worth while to pause here a moment, to classify his remark. To what did it relate? Was it about the intrinsic quality of things done? Or the disposition of the doers? Or was it not rather a full-hearted avowal of how he, the Prime Minister, had personally felt and how he would assume that the people would be found to feel, about those things. Essentially, a judgement of value. And that without prejudice to any metaphysical battle over how far any sorts of value judgement are expressive of anything more than the way those emitting them just happen to feel. Now, had Mr. Churchill, though employing his accustomed care in his choice of adjectives, opted not for 'unsordid', but for 'unselfish' few need have been found to disagree. But it seems just as well, perhaps, that he did not. For had he done so, this might gratuitously have reopened the ever-inconclusive debate on the distinction between selfish and unselfish ways of acting, and whether it is at all possible, and, if possible, whether it can ever be right, for statesmen, serving, so to say, as trustees for the future of their children, to do specifically unselfish things. Egoism and altruism: possible alternatives perhaps in the actions of individuals. But in the policies of states? Hardly, some would say. But 'unsordid': oh, yes. For that is how, to the impartial observer, or even to the beneficiaries themselves, such policies may appear. And this, it seems, quite irrespective of what may in fact have been the promptings in obedience to which they were pursued. 'Unsordid' on this view, they remain, in much the same way as a clever remark may remain a clever remark, even if not really very cleverly made.

This point, if validly taken, should have similar application to some things one might say of technical aid. This, too, might be commended as unsordid, by one whom it just happened to strike in that way: but somehow, to call it unselfish would seem to be going rather further, and saying something about the spirit behind it. And if what one is exploring is the motivations of the policy and not just the feelings it induces in oneself, one may need to go more deeply than did Mr. Churchill into the way such developments can come about. In which case one may well become aware of a crux, which, since one can scarcely resolve it, one had better be prepared cavalierly to brush aside. How, the academic inquirer will ask himself, is one to talk at all responsibly about the 'motivations' of a 'policy', seeing that the policy is the policy of a government, that as a rule a government is a person only in idea, and that it is only to persons in actuality that motivations can realistically be ascribed?

Is it into the motivations of individual statesmen, officials, politicians, members of particular groups, that it will become appropriate to inquire? As between contenting ourselves with a description of the impact which the policy has had upon us, and, at the other extreme, probing into the moral posture of men and women, or types of men and women, with whose concurrence the policy is being pursued, is there no third, intermediate approach to the forming of a view? Can there ultimately be no sense at all in asking whether a policy is unselfish or not? Can we not at least remark that some policies are more selfish than some others? And what could be our test? Does it really make no sense at all to try to think of state behaviour as presupposing conducive dispositions? Granted that in a given community there may be many whose attitudes must go for virtually nothing in the determination of policy, this surely will not be true of all. How about the dispositions of a ruling stratum, or junta? May we not identify certain sorts of attitudes as typical in the members of a class that politically matters and try to appreciate the bearing of these upon the question of what cannot and can be done? Or at least on the question of the guise most propitiously to be given to what it is being proposed to do?

One would want, of course, to have made up one's mind, and not just from a formal point of view, on the identity and limits of the class considered effectively in control. Where, for instance, there is said to be a dictatorship of the proletariat, is one to suppose that the proletariat, as such, can be holding any views, that matter, of its own? But, having formed an opinion on this issue, as well as on the question of typical dispositions, one is at least on the road towards an interpretation of the way things come to happen and of the way the wily politician puts things when he wants to put them over.

National characteristics are a tricky subject, and anything said on them is pretty sure to draw protest from somewhere: but, if there does exist an American ruling class—albeit coextensive, on a possible view, with the nation as a whole—and if there is such a thing as an American type, with definable traits, then two of those traits must surely be these: on the one hand your American is generous to a fault; and he has, on the other hand, a holy horror of being had for—what shall we say?—a person of little experience. So he has the habit of looking, in his mind, at both sides of his ten-dollar bill; but is not for that reason any less likely to give it away in the end. It was all very well, therefore, for Mr. Churchill to celebrate Lend-Lease as unsordid. To the American public, it had, in form, been presented and put over as a measure of self-defence. And similarly it may be that, if he is to be summoned to take up, as it were, the 'white man's burden', it had perhaps better be put to him as the dictate of enlightened self-interest—a business proposition—lest there be overmuch dissent. This is not necessarily a matter of representing bad business as good, but rather of laying suitable stress on

those aspects of the policy which make it the good business it is. It becomes a question, that is, of underlining such truths as, to those that are being appealed to, may be expected to appeal.

But are we therefore to say that enlightened self-interest is, with the Americans, the only fruitful form of appeal? Some observers there are who may be depended on to say just about that. A contributor, for instance, to the *Daily Worker*[1]: "It is this which Britain has been doing for 200 years. What is new is that with the Point Four programme America is hellbent on a gigantic new colonial investment drive to take over the colonies of British, French and Belgian imperialism for the profit and greater glory of Wall Street. . The talk of raising living standards is the eye-wash to conceal huge American investments for the return of super-profit. It is the programme of the hijacker forcing the older robbers to share the loot."

Are we to deny that there can be any warrant whatever for such imputations? On the morrow of Mr. Truman's inaugural speech, the *Christian Science Monitor* made the comment: "Even when the United States has eschewed the old forms of imperialism, dollar diplomacy has too often spoiled the picture. Talk of America's 'manifest destiny' has too often been more flamboyantly jingoistic than humanely helpful." So, to translate Mr. Truman's vision into action would require "prayer and care". Reactionaries would attack the project as a "plan to make Uncle Sam into Santa Claus and extend Truman's new welfare state to the world". But actually it was "a tremendous idea, not only humanitarian but practicable". Indeed, it had the look of being "almost inevitable as the next stage in American development". For the truth of course is that, as is commonly the case, here was a policy having many aspects, aspects to suit a broad range of tastes, and to acknowledge one or other of these aspects was by no means to question the rest. "Giving assistance to backward people may deter them from turning desperately to Communism. But that is not the main reason for lending a hand, and should not be any kind of reason for refusing to help. Let Christian compassion be the motive and political effects will fall into their proper place." But does one first resolve upon a policy, and then go on to endow it with a motive? One can, of course, choose which of several motives publicly to avow. Could the newspaper really ask for anything more than that Christian compassion should be adopted as the 'ostensible' motive? Even so, the advice, however morally unexceptionable, might still not be politically apropos. That would depend upon what body of potential acquiescence it was being sought to gather in. Those 'reactionaries', for example: was there not some fly to which even they might be prevailed upon to rise? Or did the paper mean to imply *non tali*

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[1] June 22nd, 1950.

auxilio? Why not have it both ways, particularly if there may be no other way of having it either way? "I don't think," declared the judicious Mr. Acheson, "we need be embarrassed to admit of disinterested idealism. But there is a hard-headed self-interest in this programme, and other nations will co-operate with us with more confidence if we say bluntly why we are in it." With which might be compared words used in the House of Commons by Mr. Oliver Stanley in moving an increase in the Colonial Development Fund: "Finally, there is the question of economic advantage. . There is no reason why something that is good for the colonies should not be good for us too, but surely we are not going to the absurd length of saying we will refuse to do things which are good for the colonies because they might also be of advantage to us." That, he maintained, would be a *reductio ad absurdum*.

There are, to tell the truth, some oddly Kipling-like overtones in some of the language wherewith American leaders have acknowledged the challenge presented by the poverty and hunger which are so rife in the world to-day. To Englishmen, the note of service-not-self-yet-self-not-nowhere must be far from unfamiliar. Nor should there, on the other hand, be anything new for English ears in the tone of Russian comment on the reasons officially given by American statesmen in recommending their 'bold new program' to their people. Stale stuff, the Englishman feels. Has he not heard it before, anent the efforts of his kinsmen overseas, and heard it not from Kremlin-fed sources only? He knows that human motivation is a complex, many-stranded affair, and that the attributing of base dispositions is the cheapest and easiest method of doing implied homage to what one does not choose openly to admire. Any simple explanation of human behaviour is liable to be over-simple, and any simple explanation of collective human behaviour is almost certain to be. Let historians pronounce categorically on the reasons why in past times men acted as they did. But let not social psychologists or even sociologists be expected to record with anything approaching a comparable certitude why nations are now doing what they do. For the appreciation of motive is not a matter for simple observation—"Man looketh upon the *outward* appearance"—not merely for interrogation—"Answer yes, no, or don't know"—but rather for judicial inference—"The Devil himself *knoweth* not the thought of man"—and it belongs therefore to a realm in which the better answers are given not to so many decimal places but with reservations suited to the circumstances, never simple, of the case. And meanwhile let us continue to recognize an unsordid act when we see one.

United Nations accepts its Opportunity

In its inception and in its original form the Point Four programme had been a unilaterally national enterprise. If only, however, though not by any means only, in view of the Moscow line of

criticism, it was well that the United Nations could so early be brought into the picture. For " the danger ", wrote Susan Strange, " is that the United States . . . if it ever makes up its mind to pursue energetically the target of Point Four, will slip into the trap and acquire a new kind of economic empire, with most of the faults and even more of the hypocrisy of others before it. . ." The main American objectives could best be achieved " through an international organization which is not suspected of imperialist ambitions ". And in June 1950 there could be reported the rallying at Lake Success, in an unprecedented meeting, of " fifty-four lands in a joint effort on behalf of the world's under-privileged masses, believing firmly that a world one-third prosperous and two-thirds impoverished cannot long remain free ". Which suggests reopening our problems of motivations in a further, yet more complex, phase. Fifty-four times as complex? Not necessarily. Or perhaps the multiplier might need to be more than 54.

Purportedly, the purpose, in so many words, of the UN ' expanded programme ' was " to help under-developed countries to strengthen their national economy through the development of their industries and agriculture with a view to promoting their economic and political independence in the spirit of the Charter and to ensure the attainment of higher levels of economic and social welfare for their entire populations " So, if for the key to motives one had only to examine avowed objectives, there might be little more to say. A single formula: *ergo*, a single mind? Which, however, has *not* been demonstrated. As always, what must interest the social psychologist or the student of international relations, is not what the ostensible reasons may have been, but how in actuality a given development has come about, and, in so far as it may have been a willed result, what motivations had entered in. We know in these days well enough, where our own personal behaviour is concerned, that, even were we capable of reporting with precision on our real reasons for doing what we do, our oh-so-sophisticated colleagues would discount it as some sort of an after-thought, developed for the comfort it could give to us rather than for any illumination it might supply to them. And we may well be conscious of a temptation, in ourselves, to make similar corrections for the component of self-deceit which we suspect of having an influence in what they, for their part, tell us of the motives that animate them. And do we not also well know how little relation may exist between the forces from whose interplay some committee decision may be born, and the logically adequate, but psychologically improbable, profession of sentiment which prefaces the ' agreed ' resolution at the end? We surely are too old to suppose that, since a coalition cabinet may have acted, it therefore has succeeded in thinking and feeling, as one. And as for the functioning of an international body, this we know is simply the construed resultant of things done by an indefinite plurality of per-

sons proceeding in the light of some formula of association. So that, though on the surface of affairs the preambles may be open for all to digest, the academic inquirer, whose mind is on realities, may hardly have time to read them through. As always, he will be fain to speculate where others may be content to swallow. He will look less for objects announced to have been aimed at than at considerations likely to have been borne in mind. And all the sorts of these—the political, the humanitarian, the diplomatic, the sentimental, the strategic, the economic, the frankly electoral, the narrowly national, the purely personal, the rashly romantic, the severely prudential—may be eligible for representation on his chart. The picture cannot, of course, ever be complete. But neither will it want to be. For what the inquirer is after is not a perfect knowledge but a deepened understanding. And the most that he accordingly will strive for is a sharpened sense of the limits somewhere within which the ultimate truth, if ever discoverable, would presumably be found to lie.

In the specific instance of the sponsoring by the United Nations of the expanded programme of technical aid (beyond, that is, what in this field it had already been doing from its inception), a first approximation to such an understanding may not be hard to come by. Not, that is, if one is willing to be party to a bold over-simplification of the problem. In the functioning of international organizations, with whatever punctilio they may protect, in their formal procedures, the principle of the equality of states, it is not to be supposed that a particular lead will be equally echoed no matter from whence it may have come. And experience goes to show that, provided it emanate from a country of sufficient power and importance, then, for most other countries, the line of least diplomatic resistance is apt to be that of falling, with formal alacrity, into line. *Inertie courtoise*: that is what some have dubbed it—this herdlike propensity for doing what 'all the best people' are by way of beginning to do. When once the Truman Administration had propounded Point Four, and revealed at the United Nations a readiness to bear so heavy a slice of the burden, it was unlikely that many others—at least in the free world—would disclose an unwillingness to join in. This technical aid was one of those subjects, exceptional as yet, on which it was apparently open to the United Nations to move ahead and add cautiously to its rather modest score. That in itself was a consideration likely to have weight in a good many minds. For, among the manifold pattern of not always compatible purposes which any given government is constrained to keep continually in view, the bit-by-bit building up of the authority and prestige of the United Nations can be assumed to enjoy a fairly high priority with many, and some sort of a place with almost all.

It is, however, not merely a mistake to expect, to the question of the purpose of technical assistance in general, a clear and single

answer. It is a mistake to imagine that to such a question any clear and single answer need exist. An old-time Aristotelian might, it is true, be prone to contend that the 'nature', and by the same token the 'purpose', of so presumably familiar a datum must surely be patent of definition. But they of tougher, or more modern, mind will start rather with the phrase, along with the concept in connotes, and ask themselves whether this concept need necessarily admit of being put into focus on a screen or pinned like a butterfly on a board. It is the phrase that has stood unaltered hitherto. The content of the concept, what fixity can we expect in that? The notion may vary in content from mind to mind and, even for particular minds, from day to day. The programme may undergo modification from year to year. And those who with one set of purposes were its parents in the past may with rather different purposes persevere with it in the future. Such indeed is wont to be the way with these large, self-developing international ventures.

Had there been posed a similar question with respect to Britain's war effort in, say, 1942, the answer might well have varied with the politics of the person addressed. For some, the sufficiently big idea was simply the survival of Britain. For some, the destruction of 'fascism'. For some, possibly, loyalty to a Moscow line. What one sees is a confluence of energies, of moral drives, and, if the essence of an enterprise may be held to reside in its primary purpose, then, in that case, it might almost be better to speak of an effort such as Britain's in the war as so many enterprises woven into one. And, comparably, one might think of the phenomenon of technical assistance as the unified expression of several independent ideas, supported each by its own preoccupation. So that it may, in a sense, be no more than a matter of personal predilection whether one speaks of technical assistance as essentially a humanitarian, an economic, or a strategic undertaking, or as three or more sorts combined.

One thing the academic student, we may hope, will ask himself instinctively, even indeed in absorbing what appears in such a volume as this, and *a fortiori* in appreciating public dicta on a topic like technical aid. Of any given affirmation he will ask himself whether it issues from someone as anxious as he himself to perceive and present things precisely as they are. And, if not, then he will wish to form some provisional judgement as to whose axe, or the axe of what body, a writer is seeking to grind, whose trumpet is being, ever so subtly, blown, whose line is being plugged, or, if you like, whose line has been ingurgitated, with hook and sinker. He will seek, dare we say, to read between the lines.

The Presentation of Point Four

It could have been a cynic who first said of speech that it was given us for the concealing of our thoughts. We remember, of course,

that there is also another, contrasting, purpose to which it may be put. But we further know that, on the lips at least of statesmen, words have not infrequently a function strictly identical with neither of these. Commonly, from the very nature of his job, the statesman is at once an apologist and a salesman—the salesman of a policy and the apologist for those whose responsibility it is. In presenting Point Four to the public Mr. Truman and his colleagues may have been rather less concerned to discover to the world what they themselves might think of it, than to suggest to all, or parts, of the public those feelings in regard to it which it will have been judged both possible and useful to have them entertain. For the salesman is ultimately less concerned to show you that his article gives pleasure to him than to have you believe that, were you to take it, it ought to give pleasure to you.

The politician, the world over, is in practice pretty constantly on the job of selling something in the moral market. As a type, he is not unlike ' little Jack Horner '. Whatever his field of endeavour, he makes a corner of it, and there he sits. But into his corner he has brought with him his pie, from which from time to time he pulls out for himself a plum. And what then does he do? Making, you may say, a virtue of rapacity, he identifies his own with the interests of mankind, and exclaims " What a good boy am I! "

More than in Britain, though probably not more than in France, foreign policy in America tends to become a species of war on two fronts. When Marshall spoke in May 1947, and Truman in January 1949, they were hardly so much addressing the outside world in the name of the American people as appealing to the American people on behalf of the outside world. Severally, America's friends and allies are represented in Washington by their respective envoys. But they also, in effect, are represented, collectively, by the White House and the Department of State. And what makes the Administration's manoeuvring in the domestic theatre of operations so distinctively an art is the fact that *vis-à-vis* the American people the White House has not, even in reserve, the American big stick.

Let us therefore return now to Point Four, to notice some of the things officially said about it from time to time, as well as things journalistically said about it on the basis of things said about it officially. It should at least help us to orientate our judgement, even though we shall not expect it to tell us what we would really like to know.

" We are here," said the President, " embarking on a venture that extends far into the future. We are at the beginning of a rising curve of activity, private, governmental, and international, that will continue for many years to come." " The underlying doctrine of

Point Four," wrote a commentator in the *New York Times*,[2] "is that we can have, ultimately, a world of plenty, and therefore [*sic*] of peace, if we pass along to the potentially rich but backward regions of the earth the magic key to prosperity. This is simply the technical know-how that in a hundred and fifty years has changed the U.S. from a wilderness to the richest power in world history." "These activities," declared Mr. Dean Acheson, "are but the first steps in a process that can change and is changing the whole aspect of life in these areas. The process has profound social and political effects, and that is what makes it an important part of our foreign policy to-day. The chain-reaction of economic development, once it has started, goes far beyond the immediate range of Point Four work." "A constructive foreign economic policy," observed the *New York Herald Tribune*,[3] "is as indispensable as any function which this nation must perform. The keynote of the Point Four program is its constructive character. The leading role would be played by private capital." "American private investors," declared the *New York Herald Tribune*,[4] "would miss a great opportunity and fail in a great social responsibility if they sat back and waited for perfect conditions to develop."

"To understand what lies behind the Truman policy," wrote the *Winnipeg Free Press*,[5] "it is necessary to realize the gigantic change which has occurred in the United States economy since the beginning of World War Two. In this period the United States has roughly doubled its capacity to produce. For such a giant the existing world market obviously is inadequate. The market must be built up to fit the needs of an economy which is still growing and to-morrow may need more outlets and more imports than it needs to-day. The United States in fact rejects the theory that its economy is now 'mature' and cannot expand further. But this expansion requires the general expansion of the world and the rising standard of living of all peoples. The reservoirs of private capital which could pour into such areas, if conditions were attractive, is . 'very great indeed'" Point Four, it was stated in the *New York Times*,[6] "is in purpose a systematic attack on the vicious circle that keeps two-thirds of the world's population too poor, too enfeebled, and too backward, to produce adequately, and too unproductive to overcome without help the poverty, sickness, and ignorance that hold them down. To these people the crude propaganda and drastic techniques of the Communists must come with the shock of religious revelation." For Communist propaganda held, in Mr. Truman's words, "that the free nations are incapable of providing a decent standard of living for the millions of people in

[2] April 1st, 1951.
[3] March 28th, 1950.
[4] July 5th, 1949.
[5] April 9th, 1949.
[6] April 1st, 1951.

the under-developed areas of the earth ". The contrary had now to be shown.

Not that the Point Four programme was, in Mr. Acheson's official eyes, " primarily something to beat down the Soviet menace ". The Soviet threat was indeed very real and dangerous, and the successful operation of the programme did help to meet it. " But this is a by-product, and the programme has a much more enduring and fundamental purpose than that. And we should be carrying it forward even if there were no Soviet threat." Point Four, it seemed to him, was " a fundamental philosophical and political idea ". It grew " out of our whole approach to the problem set by Nature to civilization. Not for us the fatalism which accepts natural catastrophe as the will of God. Indeed, our society faces the forces of nature with a cheerful, perhaps even a cocky confidence, bolstered no doubt by the experience of our forefathers. . . . In our society we organize ourselves to support men confronted with the vicissitudes of nature."

" The best way," wrote Stewart Alsop from Washington to the *New York Herald Tribune,*[7] " to put the ' bold new program ' in its proper perspective is to consider the way in which the inaugural address was written and the way Point Four came to be included in it." The idea of " some sort of plan to benefit both the industrial and backward areas of the world by raising living standards and increasing purchasing power in the under-developed areas " had long been current. But he adduced some not implausible evidence to suggest that Point Four had come " to be included in the inaugural address in part simply because the occasion seemed to require something new and striking ". It was, he incidentally added, " entirely possible that Point Four will peter out into nothing and be forgotten ". He did not, however, say he thought it would.

But also rather remarkable is the testimony of Neal Stanford, in the *Christian Science Monitor,*[8] that there had been " no cabinet discussion of the proposal " before the President " unveiled it in his inaugural address ". There had been " no official analysis of just what might be involved in what the President envisaged."

The policy will, however, have taken on its full importance not simply because the President had put it forward but because it came to have so strong an endorsement from the American people. Howbeit, not so strong as some might be tempted to think. For there was room enough for misgivings and doubts. Would Point Four, however formally successful, necessarily serve to check the advance of Communism? Would it even contribute to the consolidation of peace? Would it at all result in the desired outflow of private American capital? In whose power would it lie to ensure that it should? Would it, in relation to the processes of social change, have

[7] January 30th, 1949. [8] January 25th, 1949.

the effect of hastening such developments as the American people should wish to see? Would the help it offered reach the men and women it was intended to benefit? Would they welcome it if it did? Would the world be led by Point Four to value the United States more highly than before? Why should America undertake so indefinite a new commitment in addition to those she had already assumed? It is possible here to touch only on some of the salient points in these debates.

It was Senator Robert Taft who, in the House Foreign Affairs Committee, seriously questioned whether technical improvements in backward countries really had much to do one way or another with preserving peace. " Germany, before it began the First and Second World Wars, had risen to a tremendous height of economic and social progress. That progress did not contribute to peace." It was the London *Times*[9] that voiced very early the feeling that it would be " imprudent to think that Communism can be countered merely by industrialization with its creation of an industrial proletariat ". Nor was there any certainty that American private capital would respond to the call. " Even a world government, however ruthless," wrote Susan Strange, might find it beyond its power to " create again a full tide of foreign investment on such a scale as to set trade turning again as it turned before 1914." As it was, national governments could not force savings at that rate out of their people. All they could do—if they would—was to create conditions where the foreign investment would appear of its own accord. That was " the challenge of Point Four."

The Two-way Nature of the Process

In an important sense it was a challenge to the under-developed countries themselves. The group of these, it was reported after an EcoSoc debate in 1949, " had the difficult task of endeavouring to reconcile the interests of the business communities and national sentiment in their own countries with the need to create confidence and provide conditions and facilities attractive to foreign capital. This produced a certain understandable ambivalence. Doubts in the mind of the foreign investor as to whether and to what extent he would be permitted to control the enterprise he is being asked to finance; as to whether he will be able to remit his profits and withdraw his capital if he desires; as to whether he will be adequately compensated in the event of the enterprise being nationalized—these and similar doubts have to be overcome before the desired capital can be expected to flow. On the other hand the governments of the under-developed countries are intensely jealous of their national independence and will make no concessions which seem to place it in jeopardy, nor can they grant conditions which

[9] January 27th, 1949.

appear to give preferential treatment to foreign capital as against that of their own investing publics."

Was there in these circumstances very much that Washington could do? True, the President had spoken of negotiating treaties to protect the investor from unwarranted or discriminating treatment under the laws of the country in which the investment was made. " In negotiating treaties . . . we do not, of course, ask privileges for American capital greater than those granted to other investors in under-developed areas, or greater than we ourselves grant in this country."

From United Nations circles in Geneva in July 1950 serious discussion and study were reported of a " possible means of saving vast areas of the world from Communist imperialism ". It had become " clear to most of those concerned . . that the notion of giving aid to a country governed as South Korea has been is quite unrealistic unless the conditions attached to that aid involve far more political control than has hitherto been contemplated. . It would not be easy to impose conditions on those highly nationalistic governments as if they were still in a colonial stage." The only answer to the difficulty seemed to be " that it would be a lot easier for the U.N. to do it than for any one Government such as the U.S.". The question is of course whether that was really any answer at all.

" The present danger," declared a Public Affairs Institute pamphlet, " is that the whole pattern of attitudes and emotions relating to the colonialists of the past will be transferred to us. The U.S. has already done much in the last five years to bring this about through identification with the Colonial powers . even while at the same time it has tried half-heartedly to support nationalism in the colonies. The result has been a great loss of faith in American sincerity and purpose. We have fixed ourselves in the minds of millions of people as supporters of the social *status quo*, as opponents of change, as people also whose fear of Russia and communism is so great that we blindly throw our support behind crumbling reactionary regimes. . Remember that the poor never love the rich." A dilemma, indeed.

In the *New York Times* [10] there was reported from Washington a meeting of the National Conference on International Economic and Social Development, at which Associate Justice W. O. Douglas of the United States Supreme Court had " called for a ' Point Five Program ' that would ' extend the American revolution of social justice ' to those under-developed areas by providing representative democracy in which all would vote as they chose and land reform by which everyone could cultivate his own soil ". The idea apparently was " to promote ' peasants' revolutions ' to end economic serfdom under Point Four technical assistance programs ",

[10] April 8th, 1952.

for "without some method of turning over the government and resources to the people of these recipient areas" these programmes were "only underwriting the *status quo*", and perpetuating "the conditions in which Communism grew". There were areas, he said, before going into which, "the U.S. must decide 'Who are you for, the peasants or the landowners?'". As he understood the American spirit, it meant "freedom and justice, dignity of the individual and equal opportunity for all, not just for the British, the French or the Dutch, but for all the little peoples, the goat herders and the tenders of the rice-paddies". And Dr. Malik, of the Lebanon, declared in similar vein that "no area should be aided except those in which Governments showed 'a real concern for the people."

But Mr. Harriman was also present, and told the Conference that it would be fatal to stipulate conditions with which recipient governments had to comply in order to receive economic or technical aid. He called this a "tell 'em policy" that said, in effect, "unless you do this, we won't help you". "To me this is fatal. If we cannot hold fast to our idealism we are lost."

Where, then, did the Government's sympathies lie?

"The underlying point of Point Four," explained Mr. Acheson to a C.I.O. Conference, "is the use of material means for non-material ends. What we are really concerned with is what happens to people as individuals." But the dilemma remains. For in the moral and emotional make-up of a community, as in that of many an individual, there may coexist in perennial tension the concern for progress and the fear of change. The question at a particular epoch, with respect to a particular country, is which one of these two tendencies is on the top. Is your national hero an Atatürk or a Gandhi? Is he a Peter the Great, with his interest rather in the omelette than the eggs, or a Paul Kruger, who would leave his country's gold where nature put it lest an inflow of materialism corrupt a cherished way of life? The would-be purveyor of technical assistance may in the latter event be tempted to speculate on a change of dispensation, which as a man of progress he may work for, or as a man of principle he may patiently abide, withholding what the modernizing Russian would have wanted until it is no longer so abhorrent to the Bible-minded Boer. Robbing Peter, if you like, to pay his due to Paul!

And Paul may in fact have the heart of his people with him. "The popular remedy," wrote Mr. F. L. Brayne in the *Manchester Guardian*,[11] "for the troubles of these less fortunate countries is 'capital investment' and 'technicians'. But is it as simple as that? The loudest complaint of every reformer, whether missionary or administrator, is the obstinate resistance of the intended beneficiaries to even the most obviously profitable schemes. The people are

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[11] April 2nd, 1951.

quite happy as they are. . . . The new plans will mean . . . a complete break with every custom that militates against progress." Professor Northrop has taught us something of how that problem is to be conceived.

Anyhow, it is only with the countries as such, with their sovereign independence and their equal membership in the United Nations, that the Point Four formula envisages immediate dealings. Yet, the free world—the world of freedom—do we ourselves conceive it as a world of free individuals, or merely as a world of independent states? Is it people that we hope to benefit, or peoples, or is it existing regimes? (And what, incidentally, could we take to be the criterion of communal betterment—more cars in the capital or more canals in the countryside?) Every regime must perforce profess that 'real concern for the people' which Dr. Malik desiderated. Such professions may signify much, or little. The betrayer Judas, it may be recalled, once professed a like concern, but . . "this he said, not that he cared for the poor."

No government, let us in fairness admit, can ever care solely for the poor. And seldom can they even rank as preoccupation number one. Even the claims of public self-esteem may sometimes be given precedence. "With the break-up of the colonial system—the progressive dissolution of the British, Dutch and French empires," wrote Robert Bendiner, "many of the countries that sorely need technical and material assistance are ultra-sensitive, in the spirit of a newly won independence. It is perfectly understandable that they should look with jaundiced eye on Greeks bearing gifts, especially when the Greeks in question are identified in their minds with imperialism. The Communists spare no effort in keeping that identification alive." "With national pride at a peak," he went on, "the people of Asia, in particular, are touchy at the slightest suggestion that they are being bought." And he proceeded to commend the President for having presented Point Four, not mainly as a weapon in "the continuing battle of ideologies" but as "a successor to the old colonialism idea, the exploiting idea ". "The more we talk of Point Four as a weapon in that battle, the more we blunt its point. The President himself was on safer ground." As between the *fortissimos* favoured by the preponderance of sympathies at home, and the soft-pedallings suggested by susceptibilities abroad, one can see with what finesse the presentation of the Point Four programme will have had to be planned. As so often in the propaganda process, what might have been one public's meat was duly avoided as apt to prove another one's poison.

And conversely there was also, of course, a problem of susceptibilities at home. It was all very well for *The Times*[12] to hail Point Four as the Marshall Plan's "logical successor ". But the Marshall

[12] January 24th, 1949.

Plan had involved provision of more than mere technical know-how. And there was the American taxpayer to consider. " It is easy," remarked Joseph Harsh in the *Christian Science Monitor*,[13] " to see the various paths down which the idea could come to grief." If, in particular, " the idea were to become in effect a dole, then the costly unproductiveness of the project sooner or later would alienate the American taxpayer. To succeed it must be kept productive, rather than defensive, and co-operative rather than merely a time-buying hand-out." There could thus at first be no question of grants-in-aid.

But there remained a problem. What if the flow of private investments to the under-developed territories could be hoped for only if grants of money had first been made? As Professor Arthur Lewis was to argue in *The Observer*,[14] there was " a bottle-neck ". The only way to break it was " to make grants to poor countries to enable them to expand their public services. These grants are not a substitute for loans or private investment. On the contrary they will prime the pump." As early as the EcoSoc debate in 1949 there had been considerable concern over the question of how to meet the costs of " the low-yielding, slow-yielding ' social overheads ' which are basic to all other forms of development " " In a country like the U.S.," continued Professor Lewis, " giving away money can be supported only on moral grounds, or by fear of Communism." Whereas " for Britain, dependent on an inflow of food and materials from abroad ", it was a " condition of our own existence ". In the aforesaid debate Mr. Corley Smith had implied that the case for the giving of financial aid to certain countries might in practice come to be decided not so much on economic or strategic as on moral, or politico-moral, grounds. He spoke of " the enormous disparity existing between rich and poor in the under-developed countries " That gap should, he said, be narrowed if the workers in the industrialized countries were to be asked " to accept a lowering of their standard of living for the sake of the under-developed countries ". This, the reader will note, would be a sufficiently pertinent point if the only principle underlying Point Four were the neighbourly duty of charity. But it is a little less easy to square with Mr. Acheson's insistence on " the hard-headed self-interest " in the Truman programme. " It is not philanthropy that motivates us." To hold otherwise was one of " several mistaken notions."

A report from Paris, to the *New York Times*,[15] on the discussion and rejection, at the United Nations, of certain ideas on grants-in-aid, included the following passage: " What the U.S. disagrees with is the setting up of an international fund to which there is only one visible contributor—the U.S. The U.S. also feels, but cannot say

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[13] January 27th, 1949. [14] July 1st, 1951.
[15] December 8th, 1951.

in these debates, that so long as the countries proposing such projects allow native capital to be salted away in foreign banks, impose income taxes on their rich that are only a fraction of those imposed by the U.S. and show no signs of taking strenuous measures to mobilize their resources for the common good, their case is both morally and practically weak." Again a politico-moral point. On June 1st, 1952, however, under the headline "Point Four Grows Sprouts", the *New York Herald Tribune* was able to report 'officials' as admitting frankly "that the aforementioned program is not Point Four in the original sense". In particular, "some countries" were "special cases. . In India and Pakistan . American capital investment" was "necessary to supplement the basic development plans agreed upon in the British Commonwealth Colombo Plan". And "under last year's mutual security act", it had become possible to view each country as an "economic whole" and take the kind of measures necessary in that country regardless of the old definitions of different kinds of aid. Philanthropy? No. Mutual aid!

Earlier on, at any rate, there had been some disappointment in Britain over the apparent deafness in Washington to those overtures to American financial strategy which were implicit in the Colombo Plan. "The real trouble," wrote the *Manchester Guardian*,[16] "about the Colombo meeting, was that, though America was represented and Mr. Acheson has politely backed the scheme, America has as yet given no signs of how much money it is willing to put behind it. Until it does so all is in the air." And again, a day or two later: "It begins to look as if the new horizon was a mirage. . . . What . . . happened was that Mr. Acheson had announced that, while the plan had his blessing, the U.S. could not back it financially. This was unexpected. When the plan was debated last autumn, Americans gave the impression that they thought it was just what South Asia needed. While the U.S. had been willing in principle to invest money in South Asia, it could not do so until it was presented with a plan, drawn up and sifted by experts. Colombo seemed to supply what they wanted. What has caused the American change of mind? . The U.S. has tried to soften its blow by making it known that it will go ahead with its own 'point four programme', which can be dovetailed with the Colombo Plan. . . But the effort will be less well planned if there are Commonwealth and American schemes running side by side. There will be overlaps and waste. The temptation of the borrowers to play off the lenders against one another will be irresistible." It was not, the paper continued on March 12th, "American charity" that was being asked for. As a "counter-stroke to Communism" the Colombo Plan, if energetically pursued, "might be as important as,

[16] February 23rd, 1951.

or more important than, the Marshall Plan ". But of course almost any plan could be expected to become important if made, by American money-power, an object of the pertinent kind of energetic pursuit! And one can imagine, though of course one does not know, that the American taxpayer, judged reluctant to comb his pockets much further, even for specifically national crusades, might well have gone on strike if pressed by Washington in the interests of something presumably first conceived in London. It may be remembered that it was apparently at American bidding that the far from unpromising Middle East Supply Centre had with the day of victory been required to close down. Suspect, it was said to have been, as subserving over-zealously the interests of British trade. And there will always be those who assume that what benefits A is bound not to benefit B and C. At any rate one's impression is that, anxious as the Administration may have been for the full success of the Colombo Plan, it will have done wisely to await the better moment before presuming in this matter on the public spirit of the people. When, in the following July, there went into operation what the *Christian Science Monitor* saw as " a giant plan for a giant area ", " let us hope ", the paper said, " that ways will be found in which participation by the U.S. may be extended far beyond its present membership in the Consultative Committee ". As we know, the plan had, after all, been framed in the immediate wake of the Point Four programme and as a contribution to the self-same crusade: which that paper had greeted as " a program to win the world from war "; and able, " if guided by wisdom and inspired by love ", not only to lift two-thirds of humanity to higher levels of thinking and living, but utterly to balk the hate and tyranny which fed on ignorance and hunger.

For, say what those its cautious sponsors might, the programme did have, in every sense, the look of being a ' good ' thing; and the idealism would keep breaking through. Its authors—who could tell?—might prove to have been building better than they knew. " We like," confessed the then TA Administrator, Stanley Andrews, in October 1952, " to think that in the minds of many Americans Point Four represents one of the most constructive efforts and one of the best opportunities to build fundamental and lasting relationships between free peoples. . We are proud to be a partner and a part of their accomplishments." They were not " running around the world trying to thrust technicians or money or American ideas on people or countries " Neither were they " trying to Americanize or introduce American standards " into the countries in which they were working. " I want to emphasize that Point Four goes only where it is specifically invited and stays only where it is welcomed." And again: " We must begin where people are . and move on from there, rather than trying to impose something revolutionary." Paul gets the verdict, and let the cold war wait!

But whether thrust in, or spontaneously summoned, and whether or not by dint of trying, the technicians, in their scores and in their tens of scores, were arriving all right, and bearing their American standards with them. Wake up, England! "President Truman's Point Four programme," Raymond Blackburn, M.P., had written in the *Evening Standard*,[17] "spells deadly danger for British industry. . . Hundreds of American experts and technicians will be provided free by the American Government to advise governments and local administrations in Asia, the Near East, Africa and South America. . Unless we are associated with the programme they will necessarily create vast export markets for American industry to the exclusion of our own. Here is a great challenge to Britain. We must double the output of technicians and scientists. We cannot afford to play second fiddle to America."

International Relations Aspects

Like every other problem within the international-relations cosmos, this has been a study in the ways of social man. Superficial, no doubt: but it was felt to be worth attempting, however ineffectually. To push it further would involve fuller inquiry, on the one hand into the aggregate pattern of preoccupations of this government and that, and on the other hand into the total contemporary situational setting in relation to which any particular policy-decision by any particular government was come to at any particular time. And it would also involve seeking the technical assistance of experts in a diversity of special domains, indeed from almost every other social science. And this not merely because the discipline of international relations is as yet an under-developed academic area, with most of its 'social overheads' still to be furnished, and with little to put in the window for the enticement of those investors whose idealism is so shy of breaking through. It is rather that international relations is essentially one of that growing category of subjects whose teachers have systematically to practise the inter-disciplinary approach. Its presentation is a single 'project', the know-how for which is nevertheless best provided by a team. The measures so far taken in this region of vast potential riches are "only the first steps". We are, we must hope, "at the beginning of a rising curve of activity that will continue for many years to come". ". . . investors . will miss a great opportunity if they sit back and wait for perfect conditions to develop."

One word more, not of apology but of explanation. The reader may at times have wondered whether, as coming from a mentor of the immature, this essay may not have been a wee bit lacking in the element of priming for the spiritual pump, a shade, let us say, too *désabusé*. But one has not been merely asked to play the official

[17] May 11th, 1950.

line on the policies of the friends of freedom. If innocence on the one hand and cynicism on the other are really thought to be the only alternatives for them of riper years, then cynics, by all means and at every risk, let them of still ripening years make it their purpose to become. But some folks will surely know that cynicism is an ailment much more socially alarming than any mere disposition to look the facts of men's global coexistence squarely in the eye. It is this last, at all events, that recruits to the study of international relations are counselled to cultivate: and it does not seem, in the writer's experience, to have made them into cynics up to now.

C. A. W. MANNING.

CHAPTER THREE

ECONOMIC CONSIDERATIONS

TECHNOLOGICAL advance can be the cause of economic growth, or it can be the result of economic growth, and *de facto* it is both. Technology is a cause of economic growth, in so far as new investments or changes in production functions by enterprising individuals (or governments) raise the output of goods and services. This aspect of economic growth has been particularly emphasized by Professor Schumpeter in his famous *Theory of Economic Development.*

Similarly, technological development can be a *cause of* economic growth by the accumulation of technological aids (' new investment '). Economists and statisticians have tended to relate observable growth in output directly to new investment in the same or a preceding period (' capital/output ratio '), thus treating technological development as a direct cause of economic development. This procedure, however, overstates the role of new investment in causing economic growth since increases in output are, of course, also attributable to increases in population, better health or education, favourable external factors (' terms of trade '), improvements in institutions, higher degrees of utilization of existing capital, better organization, and so on. Sometimes economic statisticians, using more refined methods of analysis, have tried to disentangle the increase in output which may be attributed to new investment proper from those other factors; but most investigators have been content to treat the growth of capital as a convenient congeries of all the factors promoting economic growth.

Technological development is also a *result of* economic growth. An increase in income may, and usually does, lead to increased savings. Many economists maintain that the proportion of income saved will also increase with rising income levels (the ' Keynesian Consumption Function '), but this proposition is broadly true only when comparing countries at different income levels, and very doubtful when comparing the same country over long periods of time. But there is little doubt that absolute savings will increase with rising income levels. A rising level of savings opens up the possibility of increased investment, i.e. more rapid accumulation of technological aids for production.

In other senses, too, technological development may be an effect of economic growth. A community at high income levels can afford to train its young people through lengthy periods, and can afford to engage in the type of educational, scientific, and research activities

which do not directly add to production, but may be indirectly highly productive. Such activities are the fountain-head of technological advance. A wealthy community, i.e. one which has reached high income levels, can also afford the trials and errors—specially the errors—of experimentation with new technologies not possible to poorer communities.

Last but not least, the very growth of markets and consumption opens up the use of new technologies—specially capital-intensive technologies—which would be 'uneconomic' with smaller volumes of production. 'Uneconomic' technologies also tend to be non-existent technologies. In technology, too, demand creates its own supply—although the opposite is also true.

In short, it will be clear that technological development and economic development so permeate each other that they can be treated as two sides of the same coin. Hence, no useful purpose would be served by dealing with the one rather than the other.

Technological Development and Structural Change

The controversy between those who think of economic development primarily as technological development, an application of improved technology to all types of human activity, and the other school of thought which thinks of economic development primarily in terms of industrialization, is unreal and meaningless. Not only are both definitions obviously true but essentially they both say the same thing.

Economic development certainly involves structural changes. As income levels rise, there is a tendency for the non-agricultural sectors to increase relatively to the agricultural sector, as measured in terms of employment. This picture may be somewhat obscured, but by no means modified, as a result of the international division of labour. All the poor countries are primarily agricultural (including mining) in employment; considered thus even those wealthier countries which are often thought of as agricultural are not primarily so. These structural changes obviously provide scope for the increased application of industrial technologies, which, once developed, will in turn be applied to agriculture as well as to tertiary activities, so that in the end all economic life may in fact become branches of industry. This transition to generalized technology is facilitated by the fact that as wages increase in the process of development, and people are drawn from agriculture by employment opportunities elsewhere, the need arises for mechanizing agriculture and other primary activities, in order to maintain efficiency and output.

Similarly, as improved technologies raise income levels, the structure of demand changes. Relatively less food is demanded and relatively more manufactured articles and other services. While any individual country may escape the impact of this change on its own domestic structure, the world as a whole cannot; and in prac-

tice individual countries cannot either, since the degree of international division of labour cannot be raised at will and in proportion to rising income levels. In short, technological improvement leads to structural change and structural change leads to more technological improvement.

For many operational purposes, it is of course quite reasonable to distinguish between improved technology within existing sectors of the economy, and the improved technology associated with structural changes as between the different sectors of the economy: a distinction quite different from that between increasing output by the improved use of existing capital and raising it by new capital investment.

Increased output from the existing sectors without new investment is often the cheapest and most immediate form of economic growth. It avoids the need for the structural transformation of the economy with its attendant economic and social strains and stresses. It avoids the necessity to finance new investment by reducing domestic consumption, or by admitting inflationary pressure, or by financing with the aid of foreign resources which have to be repaid. Generally speaking, the advantages of raising output without new investment within the existing structure are so great that any existing opportunities should readily be seized.

Unfortunately, the limitations of this are considerable. The kind of institutional or other obstacles which prevent the full utilization of existing resources within the existing structure are often such that they can be removed only as part of a more general transformation (involving structural change and new investment) of the outlook and technology of a community. It may well be that the improvement in one sector alone cannot be maintained and requires development of other sectors, which in turn presupposes capital investment.

Impediments to Technological Development

Low Rate of Capital Formation

Historically, technological development in more advanced communities tends to take two different forms. The first form was the application of new technologies which are ' capital intensive ', in the sense that they tended to substitute capital for labour. The second form was ' capital saving ' technology which made it possible to produce goods with less expenditure of capital than previously. In the under-developed countries, the second type of technological development is not directly applicable. In the first place, the application of capital in their economic life to production is too small to produce any technological development. Secondly, in under-developed countries the problem is much more that of producing new goods rather than existing goods more efficiently. ' Capital saving ' technological development is obviously mainly confined to the latter problem.

There is, however, another sense in which 'capital saving' technology is of supreme importance to under-developed countries. That is, of making the limited amount of new capital which can be formed go as far as possible: to spread it out, as it were, as thinly as possible over the many new lines of production and additions to the over-simple economic structure of an under-developed country which are required as part of the process of economic development.

If technological development of under-developed countries is bound up with capital accumulation, the power to do this sets a limit to possible technological development. A vicious circle presents itself. Under-developed countries cannot form capital because they are poor; the margin over and above immediate consumption is small. Not being able to accumulate much capital, they cannot enjoy and apply greatly improved technologies. Not being able to apply the improved technologies, their output of goods and services remains small. Thus they remain poor. The vicious circle closes itself.

Several methods could be suggested to break this vicious circle, but all of them present specific difficulties in under-developed countries. Poor as they are, in many of these countries the margin over a subsistence minimum for all could perhaps be more effectively utilized for savings and capital formation. But this immediately raises a new difficulty, in that a limitation of consumption to the essential subsistence minimum will greatly limit the demand for all kinds of manufactured consumption goods, and therefore indirectly for the capital goods to produce them. This throws a great burden on public capital formation, which in turn raises problems of public administration and public enterprise in under-developed countries.

Another possible method of breaking the vicious circle would be to try to promote capital formation from sources other than the small or non-existing margin above immediate consumption. An example of this is the method of 'community development', in which the spare time of the rural population is utilized for the direct construction of roads, better houses, hospitals, agricultural irrigation works, etc. In under-developed countries generally, where farming is not mechanized, the rural population is often in a condition of 'hidden unemployment' during the off seasons, in drought years, and so on. But again, a good deal of technological development could not be tackled by this method.

Yet another way of breaking the vicious circle might be to improve the efficiency of capital already employed in under-developed countries so that an additional stream of goods and services is created, which could in turn provide a margin and basis for new technological development. These possibilities are also limited. The efficiency of capital already employed is greatly bound up with the institutions and general economic level of the country, and generally speaking the efficiency with which existing capital is used tends to be

correlated with the formation of new capital. In other words, if communities were able to employ their existing capital more efficiently, they would not be caught in the vicious circle in which the formation of new capital is so difficult.

There remains a further method (historically most important) of breaking the vicious circle by the introduction of foreign capital to provide the crucial margin as a basis for further capital formation. This also creates its special difficulties. In the first place, many of the more developed countries suffer from a shortage of domestic savings in relation to their own investments needs. Contrary to a popular belief in 'unlimited opportunities' of under-developed countries, in fact the opportunities of productive investment of foreign capital of the type provided by private investors are on the whole more limited there than in developed countries. The real need for additional capital in under-developed countries, in the first place, is often for 'indirectly productive' capital, such as power, transport, port development, housing, investment in health and education. Being indirectly productive, however, such fields of investment do not attract foreign capital of the normal profit-seeking type. Yet once these 'external economies' exist, other foreign capital would find opportunities for productive employment and be more easily attracted. Here we see an illustration of a vicious circle which prevents the breaking of the vicious circle of poverty and lack of capital accumulation. In the circumstances, it has often been stated that for the under-developed countries suffering from extreme poverty and over-population, neither development by their own bootstraps nor development by foreign capital of the normal type is possible, and that development requires international co-operation of a new type. The creation of international technical-assistance programmes, of the International Bank for Reconstruction and Development, of colonial development corporations, the Colombo Plan, colonial-welfare funds, are all straws in the wind blowing in the direction of such new forms of international co-operation.

However the vicious circle is broken—if indeed it is broken—there is always a danger that it will rapidly re-establish itself. The poverty of many under-developed countries is so great, the desire for increased consumption so urgent, the difficulties of controlling consumption so great (and sometimes the increase in population so formidable), that the increased flow of goods and services from 'the first round' of capital accumulation may be swallowed up in consumption. Thus, a basis for further capital formation, and the starting-point for self-sustaining technological and economic development would not be formed. Hence, although it is generally true that 'the first step is the most difficult' in development (in the sense that a vicious circle has to be broken), in another sense this statement can be very misleading. It is just as important to 'plough back' a high proportion of the increment into capital formation as it

is to secure the initial increment. Often a country which has taken the first hurdle has not managed to take the second, and thus no technological development has been made possible.

Difficulty of Adjusting Technology

In the old industrial countries, the technology, economy, and the people grew up, as it were, together. Technology was developed in line with economic requirements and resources. The economic problems of the day shaped the course of technological research, and the training and adjustment of people to modern technology proceeded more or less simultaneously with the development of technology itself.

All this is specially true of Great Britain, where the industrial revolution had its origin. But it also was true of European countries, or even Japan, where the time-lag behind Britain was not serious enough to create difficulties, and the mentality and ability to adjust the population was sufficiently close. And it was specially true of the newly peopled areas with rich resources, such as the U.S.A., Canada, and Australia. In fact, in the latter territories the advantages of a social structure created *de novo*, in perfect harmony with technological requirements, and the selection of an adjusted population, by both age and training, gave those countries considerable advantages over the countries in which the new technology originated.

The situation of under-developed countries, however, is more difficult. By now, the difference in resource endowment between the developed countries and the under-developed countries is considerable. By and large, the presently available technology has been evolved by the more developed countries, and pre-supposes a richness of capital resources and a desirability of saving labour. Roughly speaking, the aim is to increase the productivity of the economy per unit of labour employed, and the employment of more and better capital per unit of labour is one of the highways to that goal. In the under-developed countries, on the other hand, there is an abundance of labour and a scarcity of capital. The aim of these economies would be more to maximize output put unit of capital employed, rather than per unit of labour. Labour-saving may merely add to the already heavy unemployment (open or hidden) and under-employment of human resources. The chief potential asset of many under-developed countries is their unemployed or under-employed labour power. Modern labour-saving technology is not well designed to enable them to bring this potential asset into play.

Another facet of the same problem is that modern technology tends to become more and more expensive since present capital for future labour is more and more substituted. In view of the limited resources of under-developed countries, this limits severely their

possibility of forming capital by a process of balanced growth. The cheaper technologies with which balanced growth might be possible, even with the limited resources of under-developed countries, do not exist any more. One may speculate that if England had had to start its industrial revolution with our present technologies, the initial steps would have been infinitely more difficult; or perhaps could never have been taken.

There are, of course, technical innovations which go the other way, i.e. reduce the amount of capital required per unit of output.[1] For example, the development of electricity, which enables production to be more scattered, reduces the economies of large-scale production and thus makes less highly mechanized technologies applicable. This development would be specially significant for the under-developed countries, if the generation of electricity itself could be made less expensive and less mechanized by producing electricity from atomic sources. All such capital-saving developments of technology are of particular value to under-developed countries.

It is probably not feasible to revive, for the benefit of under-developed countries, cheaper technologies of the past which are now submerged in the stream of technological history. It might not even be desirable to do so if it were possible. What is desirable is careful selection in the transfer of technologies to under-developed countries. The ideal would be to develop the special kinds of technology suitable for them, but in view of the natural concentration of technological progress in the developed countries and the unity of research, it is doubtful whether this is possible. Another approach is to transfer to under-developed countries, preferentially, technologies of countries where the resource endowment is more similar to the under-developed countries even while technological development is far advanced. For instance, in many cases, European or Japanese technologies might be more suited to under-developed countries than American technologies. It is often emphasized as a special advantage of international technical-assistance programmes—as distinct from bilateral programmes rendered by the most advanced countries—that under-developed countries can be assisted by persons familiar with the advanced technologies of countries with not too dissimilar resource endowment.

There are, of course, advantages to be set against these difficulties. Being able to draw upon a stock of already developed technology, the under-developed countries are saved the difficulties and expense of trial and error. They will be able to jump stages in technology where their resource endowment and requirements makes such jumps advisable. The traditional juxtaposition of ox-cart and aeroplane in some parts of the under-developed world illustrates this point. A judicious combination of transferring to under-

[1] See above, p. 67.

developed countries the successful and tested techniques of other countries, with a constant endeavour to adjust these techniques to the specific resource endowments and requirements of poorer (and often labour-abundant) countries, may perhaps serve to give under-developed countries the best of both worlds. But this combination is not easy to achieve. Moreover, so far we have considered only the directly economic and financial problems involved in the technological development of under-developed countries. There are also formidable psychological and social obstacles, and it is time to say a word about these now.

Before doing so, however, it should be pointed out that adaptation of technology to the under-developed countries has also a climatic aspect. By and large, they are tropical countries. The developed countries are in the temperate zone, and the technology developed by them is the one suitable for temperate climates. The dominance of a ' temperate technology ' is reflected throughout the tropical under-developed countries; in the kind of tools used, the optimum efficiency of machinery at different temperatures, chemistry and engineering of the soil, construction materials, etc. In some under-developed tropical areas even the type of housing and clothing of the ' Westernized ' groups reflects adjustments to temperate climates rather than to living in the tropics. It is quite likely that even the more ' advanced ' agricultural techniques in rotation, ploughing, timing of operations, use of fertilizers, and so on, were developed for the soils of temperate zones, and are not always adapted to the different nature of tropical soils when being transferred to under-developed countries.

People and Technological Development

Technology is not a matter which can be isolated from the general social life and make-up of people. In the old industrial countries, technology has been largely created by the people who were also using and maintaining the technological aids to production. No conflict arose in the mutual adjustment of people and technology, or at any rate the conflicts arising were resolved as one went along. Similarly, social institutions were gradually adjusted to the initial impact and subsequent evolution of technology.

In the at present under-developed countries, the situation is more difficult. Things which in the older industrialized countries—and in the newer countries settled by people from the older industrialized countries—happened from well-prepared ground over many decades, are supposed to happen from ill-prepared ground and much more rapidly. To jump stages in technology may raise economic difficulties, but to jump stages in human adjustment to technology may raise even more serious difficulties, and by no means only economic ones.

Economically, the transference of late technology can be extremely

wasteful, where use and maintenance are in untrained and uncomprehending hands. Mechanical use is easier to teach than care and maintenance. Hence, where elaborate capital is used in under-developed countries, it is sometimes found that its long-run productivity is low, because of the short effective life of the equipment. The lack of trained personnel and understanding for the needs of machinery may join with the absence of ' external economies ' such as specialized engineering services, repair facilities, to produce this depressing result.

The introduction of the latest technology into under-developed countries appears tempting. Not only does it satisfy national pride to have ' the latest and the best ', but elaborate equipment may appear desirable because it can be operated with less skilled labour. Thus it might appear that the latest technology is cheap for under-developed countries, since it reduces the need for training people. An unskilled man can do with a machine tool what a skilled man can do with his hands or simple hand tools. Yet in practice this turns out to be a fallacy. An elaborate machine replaces a skilled man in use but a skilled man is still needed to maintain and repair it. Furthermore, where training on simple tools and machines is short-circuited, a vital ' growing point ' in economic development is missed.

A normal sequence of economic development would be for simple tools and machines to be imported first, and then to be home produced, as knowledge, training, and understanding of the simple machine advances in the community. Imports would then shift to more elaborate machinery on an ascending scale of progress. The jump from the wooden stick to the combine harvester, or from ox-cart to aeroplane, or from the village smithy to the continuous-strip mill, all prevent this ascending and natural advance from the simple to the elaborate. The gap opening between man and the machine is too large to be bridged. The machine wastes itself prematurely for lack of human co-operation, and the result is waste and frustration. Some of the lessons of the Tanganyika groundnuts scheme apply here. " Give us the jobs and we'll finish the tools! "

What is true of man, is also true of social institutions which are man's creation. Where the evolution of technology has been gradual, social institutions have changed with it. The creation of a professional middle class, of technological experts, of industrial managers, of a class of enterprising farmers, of corporate forms of enterprise, of accountants, of city dwellers, and so on, are all as much a matter of changing social institutions as they are of developing human skills. Often in under-developed countries, caste systems, feudal systems of land ownership, family cohesion, formal politics, artistic rather than scientific pre-occupations are characteristic of the social structure.

Again, the change in social institutions and technological development must proceed together. The creation of a technically trained

or professional middle class alone, without simultaneous economic development, will lead only to waste and frustration, as surely as the introduction of machinery without the training and adjustment of people and institutions.

In their impatience to 'get on with the job' the statesmen of under-developed countries, as well as the technicians of the developed countries, have tended to under-rate the importance of adjusting institutions of under-developed countries together with technological development. It is perhaps unfortunate that a 'development programme' is primarily thought of in terms of structures and investment, rather than as a complex system of investment, training, and education and legal and political institutional reforms.

In short, the 'economics of technological development' can be very misleading. A 'sociology of technological development' and a 'psychology of technological development' are also needed. What is more, these three are needed not alternatively or one after the other, but they are needed simultaneously and in mutual interdependence. It is this fact as much as any directly economic factor which makes the first steps so difficult.

We had already previously arrived at the conclusion that even in the economic field, development, to be lasting and continuous, should preferably be simultaneous on a broad front. Agricultural development without industrialization will create disequilibrium and inconsistencies, as will also industrialization without agricultural development. This mutual relation also applies to public investment *versus* private investment, social facilities *versus* productive capital, export industries *versus* domestic consumption, etc. Even this statement, broad as it is, may now be seen to be still too narrow. Development, to be sturdily based, must not proceed on the economic front alone. A simultaneous adjustment of laws, institutions, social relations, governmental policies, and even human psychology must at least go hand in hand with economic development. In many cases it must precede it rather than accompany it, since in the absence of such non-economic change capital cannot be absorbed and will lead only to waste of resources.

An illustration of social adjustments required before economic development can properly take hold is the existence of the large family in many under-developed countries. Where the social system burdens the income earner with wide and vague social commitments for the care of distant cousins and even hangers-on, and where increase in income merely leads to increased burdens and increased responsibilities of this kind, one of the main props for economic development based on individual incentives is removed. If nothing else is put in its place, and the social institution of the wider family continues, economic development is indeed an uphill fight.

An Illustration: Land Reform

A consideration of the problem of land reform in relation to technological development will serve to demonstrate the interplay of technological, economic, social, and institutional factors previously discussed. Since under-developed countries are usually primarily agricultural in terms of employment, and since industrialization also presupposes an increase in agricultural productivity, land reform is one of the key problems in the earlier stages of economic growth.

Let us first realize that in the absence of land reform, i.e. under existing conditions, agricultural investment may be very largely wasted. The individual units may be too small or too fragmentated to permit of the application of modern technique, for instance mechanization or even the use of ploughs. Where the unit is large, absentee landowners may not be willing to improve agricultural technology, and share-croppers without security of tenure or a stake in the land may not be willing to undertake improvement themselves or even to use equipment carefully and efficiently. Where large estates predominate, cash crops may be preferred to food. Where food is intercropped with the main cash crop by share-croppers, or grown in their own allotments, this source of food supply will cease if the main cash crop becomes unprofitable, and employment is terminated. Hence the population is driven out to become landless migrants or join the unemployed fringe in the town slums. Or again, as a result of lack of land tenure on the most fertile land, farming may be carried on on marginal land.

In all these illustrations it is obvious that agricultural investment alone without changes in land institutions would be sheer waste. But land reform itself, while a necessary pre-condition for development, will usually not be a sufficient condition. In fact, land reform by itself may do more harm than good.

Where large estates are broken up, and the unit of agricultural organization is reduced, agricultural efficiency may suffer. The landowner or owners of plantations could at least afford to invest in equipment, fertilizers, and insecticides. The new freeholder may be too poor to do so, particularly if he is saddled with taxation to pay for his land and has to participate in the compensation for the landowners.

Or again, land reform may result in a big change-over from cash crops to food growing, thus perhaps improving the nutrition of the countryside, but disrupting the foreign-exchange budget and hence the prospects of any industrialization programme. Moreover, while food production may improve, it does not follow that food supplies to the towns will also improve; hence the lack of foreign exchange to pay for imported food—because of the reduction in cash crops—may result in famine and disruption.

Another limit to land reform which should be clearly realized is

that it cannot deal with the more fundamental problems of many under-developed economies such as agricultural over-population. Even after land reform, the individual unit may still be too small to make the economy viable, except for definite industrialization.

While land reform opens up the *possibility* of economic development, it is by no means a *guarantee* of economic development. There is not even a guarantee that land reform *taken by itself* will be a contribution to economic development.

The newly established farmer (or member of an agricultural co-operative) needs capital, he needs technical advice (which presupposes the development of a county-agent system or its equivalent), he needs credit on the security of his land or otherwise, he needs co-operative facilities of various kinds in production, marketing, and equipment, he needs organization of communal and local improvement schemes, and finally he needs support by the general development programme of the country through increased provision of transport, power, and many other services. Land reform itself is never a substitute for a development programme.

But land reform is often a pre-condition of development. It is only when the individual agricultural producer can be given an incentive to try out new things, to improve the land, to apply capital, enjoy tangibly the fruits of his own progress, that agricultural productivity will increase. And it is only by the increase in agricultural productivity that labour can be set free to change the structure of employment gradually in the direction of industrialization, that this labour can be fed in the towns, that a market for manufactured products and capital goods can be created, that foreign exchange can be set free to import capital goods rather than import food, and that industries can be supplied with the agricultural materials and minerals which they need.

And once the increase of agricultural productivity has made possible this step towards industrialization, industrialization in turn will have similar beneficial reflections on agriculture. The growing industries will provide expanding markets for food and agricultural materials; they will supply the manufactured incentive goods and capital goods which agriculture needs; they will save on the import bill to set free foreign exchange for the import of capital goods for agriculture, etc.

It is in this cumulative relationship between agricultural development and industrialization that the main prospect of economic growth in under-developed countries lies. In practical conditions, the original impetus will frequently have to come from the agricultural end. Sometimes it will come from industrialization, made possible by an influx of foreign capital, or a sustained favourable change in terms of trade, technical innovations, suitable immigration, or other external factors. The pattern of economic and tech-

nological development is varied, but mutual interplay of agricultural development and industrialization always plays its part.

Industrialization—a Focal Point of Economic Development

After due account is taken of the mutual dependence of agricultural and industrial development on each other, there remains one sense in which industrial development, but not agricultural development, is the focal point of economic development.

(1) In all countries—under-developed as well as developed—it is almost universally true that *per capita* output is larger and more stable in the industrial and related sectors than in the agricultural sector. Hence, a shift in relative importance from the agricultural to the non-agricultural sector tends to result in increases in real income. In this respect, a shift in relative importance from agriculture to non-agriculture can be considered as being in itself the equivalent of an increase in over-all economic productivity.

(2) As income levels rise in the course of economic development, less and less of the increase is spent on food and other agricultural products, and more and more is spent on manufactured articles of all types. It is, of course, possible to maintain the structure of domestic *production* unchanged in face of this change in the structure of domestic *demand*, but in view of the limitations on the total quantum of foreign trade, there are obvious limits to this process. Broadly speaking, it must be expected that the structure of domestic production will follow the structure of domestic demand. Hence a shift to domestic production of manufactured articles is almost inevitable as development proceeds and incomes rise. Moreover, in the course of development, it is likely that the competitive advantages in international trade will gradually turn away from primary products and towards manufactured products, and this is a further reason why domestic production is likely to be broadly governed by the change in the structure of domestic demand.

(3) Continued economic development consists in a more universal application of advanced technologies and in a gradual adjustment of economic organization and human incentives to increased mechanization. It is industry rather than agriculture which provides the 'growing points' of this advanced technology. There is, of course, wide scope for mechanization in agriculture, but this presupposes industrialization somewhere, and it also constitutes a derivation from industry. In some sense, mechanized agriculture has become a branch of industry and is conducted on industrial principles. Historically, there is no doubt that it has been manufacturing which has provided the breeding-ground of new technology, mechanization, and human preparation for a more universal application of advanced technologies.

(4) An industrial economy enjoys greater flexibility of resources than an agricultural economy. The same advances in technology

and productivity which enable incomes to be higher also enable resources to be shifted from one branch or sector of economic life to another. Depreciation of industrial capital is often rapid, enabling new choices to be made at the time of re-investment. Because of the presence of durable goods of all kinds, demands can more easily be postponed and shifted. Industrialization therefore tends to make the economy more diversified and more flexible. Economic development implies such diversification and flexibility as well as rising income levels. Here again the relation of complementarity becomes apparent. It is only by providing the diversification and flexibility of industrialization that the risks of primary production, especially for foreign markets, can be sustained.

(5) Finally—and most important—there are fairly defined limits set to industrialization based predominantly on the development of primary production, except in specially favourable circumstances. The demand for primary commodities does not grow at the same rate as industrial production or the demand for manufactured products. The economizing of raw materials in industry, the development of synthetic materials, economic progress in increasing output of raw materials within the more developed countries—all these have combined to keep the growth and current consumption of primary commodities from under-developed countries within certain well-defined limits—limits well below the rate of growth of industrial production. The rate of growth of food consumption is limited by similar factors, except for synthetic substitutes which have not yet affected food markets very much (although they may). This means that economic progress in under-developed countries could not be indefinitely based on increased production for export. It might still be based on increased primary production for home consumption, but it is evident that such increases, in the case of raw materials, require industrialization to provide a market. Similarly, in the case of food, increased production may well depend on development of urban markets and thus, again, industrialization.

When these factors are surveyed, it is true that industrialization is a focal point of development. This statement must be taken together with what has previously been said about the mutual interdependence of agricultural development and industrialization, in order to acquire balance and substance. It is the combination of interdependence of agriculture and industry on the one hand and industrialization as a focal point of development on the other hand which promises to result in a path of sustained and balanced economic growth in the under-developed countries.

H. W. SINGER.[2]

[2] The author is a member of the Secretariat of the UN, but the views expressed in this contribution are his own and are not necessarily those of the United Nations Organization.

CHAPTER FOUR

MORAL AND ETHICAL IMPLICATIONS

PART ONE: A WESTERN VIEW*

THE difficulty of introducing modern Western ways into non-Western societies has not received the attention it deserves. It applies as much to modern Western legal, political, economic, agricultural, medical, and even religious forms as it does to machinery and to other technological instruments.

The difficulty is not that Asian or African peoples, when properly trained, cannot master these forms. India has several efficient air lines, wholly under Indian operation. Her present railways are owned by the government and operated by natives with reasonable efficiency. There is also an Indian owned and operated steel industry. One Chinese in Indo-China manages, through his own sons, a remarkable, interlocking complex of modern commercial firms. There are many outstanding Japanese, Chinese, Indian, and Islamic mathematical logicians, mathematical physicists, and mathematically minded engineers. These facts show that there is nothing in the inherent nature of non-Western peoples to prevent them from becoming proficient in the Western technological ways and the abstract, formal way of thinking from which these ways derive. Apparently all men are born free and equal so far as the innate potential capacity to think and behave in Western ways is concerned, just as Westerners, through the cultivation of impressionistic painting and the appreciation of existentialist philosophy, are now acquiring the intuitive approach to nature and experience in which the Oriental is a past master.

Nevertheless, the following facts, and countless others like them, have to be faced. After 1912, Sun Yat-sen and his successor, President Chiang Kai-shek, introduced Western liberal legal and political forms, Protestant Christian religious institutions, and modern scientific ways into China. President Chiang Kai-shek's devoted follower and present colleague, Chiang Monlin, the former Vice-Chancellor of Peking National University, has described the legal and political result as a miserable failure.[1] Instead of achieving its

* The author is indebted to the Wenner-Gren Foundation for Anthropological Research for grants which have made this inquiry possible.

[1] Chiang Monlin, *Tides from the West* (Yale University Press, 1947), p. 252.

aim, these liberal democratic Western ways produced a "corrupt National Assembly" which became "a headache to the entire country".[2] He indicates also that modern Western science and its machines underwent a similar corruption.[3] Even the most simple Western farm machinery or mechanical equipment tends to become ruined, when left in the hands of Asian, Middle Eastern, African, or South American natives, because of their failure to oil it, operate it, or repair it properly.[4]

The results of the introduction of Roman Catholic or Protestant Christianity into societies with non-Christian religious traditions are similar. The 'rice Christians' of Asia are well known. The natives who become Christians in order to attend free classes in the English language and thereby obtain more lucrative governmental and business posts in those areas under Western imperialistic rule or under strong Western commercial influence are also not unknown. And even in the countless majority of the cases where acceptance of the Christian faith is sincere, as in China, the meagre opposition which it offered after centuries of missionary effort to but three decades of indoctrination in the materialism and atheism of Communism gives little ground for believing that the sincere native Christians really grasped what Christianity means. They probably had its forms and its spirit in an intuitive Asian way, rather than in its own terms.[5] The outcome was some very fine Asian Christian spirits but a native society in which Christianity had not taken deep root.

Western medical men report similarly that they can lift the level of health of an Egyptian, Chinese, or Peruvian native village practically to the level of a modern European city and keep it there, even when directed by natives, so long as the Western supervisors remain. Unfortunately, however, all too frequently the village returns to its original condition when the Western advisor withdraws and it is left under native leadership alone. It does very little good to put a bottle of pasteurized milk on every doorstep throughout the world if the delivery boy thrusts his dirty, unwashed thumb, fresh from vegetables grown with 'night soil', through the bottle's paper cap in placing it there. Nor does it avail to train the delivery boy properly if the housewife pours the uncontaminated, pasteurized milk from a properly sealed bottle into a kitchen pan wet with water from the washing of such vegetables, or if the natives, through their normal habits during the remaining twenty-three hours of the day,

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[2] *Ibid.*, p. 140. [3] *Ibid.*

[4] Northrop, *The Taming of the Nations* (Yale University Press, 1952), Chapter 7. See also Northrop, "Asian Mentality and United States Foreign Policy", *The Annals of the American Academy of Political and Social Science*, July 1951, pp. 118–27.

[5] Northrop, *The Meeting of East and West* (Macmillan, New York, 1946), p. 381.

reinfect themselves in some other way.

But if this corruption of Western legal, political, mechanical, religious, and medical ways is the frequent result of their introduction into non-Western societies, why is it that some members of these societies can manage these ways without corruption? As we have noted, the difficulty is not one of innate and ineradicable incapacity.

Practical Ways and Theoretical Understanding

In answering this question, two things must be distinguished. One is the expert technical training of the native mechanic, lawyer, politician, or Christian in the practical application of Western institutions and skills. The other is the way of thinking about this expert technical, practical behaviour, which is necessary if one is to understand why it is, what it is and why it must not be corrupted by short cuts that appear, to those with merely an intuitive mentality, as equally efficacious. It is this distinction between practical ways and the theoretical understanding of them that marks the difference between individuals in non-Western societies who can handle Western ways efficiently only so long as Westerners are beside them, and those natives who can manage these ways correctly when left to themselves.

It is one thing for a native to learn the practical expertness, under the supervision and tutelage of a top sergeant, necessary to repair an aeroplane motor in a trustworthy manner. Under such circumstances the ways of working, the morale enforcing the native to do precisely as instructed, and the immediate penalties for deviation are such that the native by mere mimicking and by enforced habit, without understanding, will do an effective job. The trouble, however, with such merely practical training is that when the Westerner withdraws, the native way of thinking about the newly acquired practical skills takes over. From the standpoint of this native mentality, these newly acquired, practical habits seem to be without rhyme or reason, a mere hocus-pocus, introduced to satisfy an arbitrary ritual upon which gadget-minded Westerners, without a proper sense of values, insist. Inevitably the native proceeds to think about what he has been doing in terms of the only concepts for understanding it which he possesses: namely, those of his own tradition and culture. As Chiang Monlin and others have noted, these native ways of thinking are quite inadequate to make the new, precise, practical skills meaningful, necessary, or important.[6] Inevitably short cuts appear, or perhaps the old skills are carried on by habit but other things, promoted by the native mentality, are also done which completely destroy the effectiveness of the habitual practices.

[6] Chiang Monlin, *op. cit. supra.* See also Northrop, *The Taming of the Nations, op. cit. supra,* especially Chapter 7.

When this corruption of Western ways does not occur, it is because the top natives managing or supervising the entire process have spent the time and the money necessary to go to the West and acquire, in theoretically and mathematically grounded engineering, medical, military, and theological schools, or in the departments of pure science and philosophy, the basic concepts and mentality necessary to understand the outward Western institutions and ways in the Western theoretical manner. Only the large, influential, and more wealthy patriarchal joint families of the native, non-Western societies can afford such training for native sons. This is why Western industries and ways that are efficiently operated by natives tend to be owned in the end by a few patriarchal families such as the Soongs in China, the Oeis in Indonesia,[7] and the Berlas in contemporary India.

Political Implications

The political implications of this phenomenon are important. The major popular demand throughout the undeveloped areas of the world is for a lifting of the economic and medical well-being of the masses to the level of that of the modern Western societies. This political demand takes on two forms: one negative, the other positive. The negative demand is for the dismissal of all Western supervision. Such supervision, whether political, economic, or religious, is called imperialism. The positive demand is to run their societies themselves.

These demands are not as easy to reconcile as non-Western natives or Western liberals have supposed. The natives' negative demand is anti-Western, yet the major reason for this demand is the observation of economic, medical, and other advantages of Western ways. In short, the native wants the advantages of being Western while remaining himself and being anti-Western.

His positive demand to run affairs in his own way is equally paradoxical. By his own way he means—because of his desire for a standard of living for everyone comparable to that of Westerners—the running of his native society by and for all the people, that is by the hundreds of millions in the villages rather than by a few top nationally privileged families. Moreover, this is what Western idealism has taught him to be the idea of the good. Nevertheless the fact is that his own society's way of running society is not thus liberally democratic, locating the source of political authority on an egalitarian basis in the masses of the people who express themselves through democratically elected and constitutionally guided officials at the national level. Instead, all these non-Western native societies are family-centred and tribal-centred rather than nation-centred and

[7] James Michener, "Chinese Success Story", *Life* (Special issue on Asia), December 31st, 1951, pp. 76–81.

contractually guided in their binding social organization and in their moral and religious loyalties. Not only is the family and the tribe the basic locus and transmitter of moral, political, and even religious authority and value, but within the family the rule of the elder, as determined by biological birth, constitutes the good.

By its very nature the social ethics of a patriarchal or matriarchal joint family society is hierarchical and non-egalitarian. Its social, political, and religious authority centres in the eldest member of each family and the village elders of the many families.

Practically, this means that primogeniture is the law of inheritance in such a society and that filial piety or family loyalty is its highest moral and social obligation. This makes the inter-family use of finance capital, necessary to run a modern Western technological industrial society in anything approximating an egalitarian democratic way, morally difficult if not impossible. Even in Westernized commercial Hong Kong, with its large Chinese population, one found in 1919 few if any inter-family Chinese business firms of any consequence. This is why a native-run Westernized society begins so often with a Western constitution and a democratic economic and political programme, only to end with a family-run government and the Westernized native industries owned by a few families. The Soong family in President Chiang Kai-shek's National China was one example. The right-wing millionaire families in present Free India are another. Witness also Prime Minister Nehru's difficulty, not yet overcome, of passing the Hindu Reform Bill which, after the manner of Jefferson in early Virginia, outlaws primogeniture and breaks the old family ties and loyalties.

Ethics and the Law

Even when native leaders succeed in changing the old patriarchal law of status to the ethics of a positive law of contract in which moral man is universal man rather than family or tribal man, the patriarchal living law habits of the masses change exceedingly slowly.[8] The present persisting influence of the ethics of family status of Sir Robert Filmer's *Patriarcha* in the First Families of Virginia[9] and the present Dixiecrats shows how long it takes the

[8] For the difference between the law of status and the law of contract, see Sir Henry Maine, *Ancient Law, Its Connection with the Early History of Society and Its Relation to Modern Ideas* (John Murray, London, 1908). For a third type of positive legal procedure in non-Western societies and the scientific and philosophical mentality that goes with each type, see my "The Philosophy of Natural Science and Comparative Law", *Proceedings and Addresses of the American Philosophical Association, Eastern Division, 1952–3,* Vol. XXVI, 1953, pp. 5–25.

[9] Peter Laslett, editor, "Introduction", *Patriarcha and Other Political Works of Sir Robert Filmer* (Blackwell, Oxford, 1949), pp. 1–43 inc.; also Laslett, "Sir Robert Filmer", *The William and Mary Quarterly,* Third Series, Vol. V, No. 4, published by the Institute of Early American History and Culture, Williamsburg, Va.

living law to catch up with the ethics of the Western positive law of contract even in the most modern nations of the West.

Danger joins difficulty when the new positive ethics and law, which would reform the ethics of the native living law, comes from abroad. The danger is that both the new foreign values and ways and the old native ones become corrupted. The local leader learns enough of the modern West on the outward, practical side to become disabused about the forms and practices of his own culture. Forthwith he ceases to be himself, thereby cutting himself off from the underlying spiritual roots of his own society and from the masses of his own people. At the same time he has not gone deeply enough beneath the Western instruments and institutions to discover the unique mentality and spiritual roots which they require for their nourishment. Thus he runs the tragic risk of falling between both moral worlds.

Sociological jurisprudence has a description for this situation.[10] It is one in which the positive law or leadership of a society is ineffective because its norms do not conform to those of its underlying living law. The fate of the Prohibition Amendment in the United States is an example.

What must be realized in combining modern Western ways with those of non-Western societies is that the living legal norms of these two types of societies involve incompatible loyalties. The native societies entail patriarchal or matriarchal family loyalty as the highest social obligation. Modern Western personal and social ethics and all its technological institutions derive from a way of thinking about man which breaks his moral nature loose from the inductively felt family ties of a law of status and identifies his moral, political, economic, and religious personality instead with an axiomatically constructed, legalistically and constitutionally expressed law of contract before which all persons, regardless of family or tribal status, are equal. The problem of putting together these two different living laws and their, in part conflicting, spiritual values is the heart of the task of introducing Western ways—be they medical, mechanical, economic, political, or religious—into non-Western societies.

So far the result, whether attempted by Westerners or by natives, has been a failure. Chiang Kai-shek failed in China. The British failed in India. The French failed in Indo-China. The Dutch failed in Indonesia. The Japanese succeeded perhaps better than anyone else—yet Pearl Harbour and its aftermath is the monument to their defeat. Mr. Chester Bowles is forced to write in his *Ambassador's Report* of " the frightening gap between the educated

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[10] Eugen Ehrlich, *Fundamental Principles of the Sociology of Law*, Moll, translator (Harvard University Press, Cambridge, 1936).

Indians and the villages ".[11] The leaders of Turkey, notwithstanding the optimistically described modern European reforms of Atatürk, are confronted similarly to-day with what may well turn out to be a serious impasse between the modern Western legal, political, and economic programme which they have for their people and the reaction of the millions of Turks in the villages to mediaeval Islamic moral and religious social loyalties and ways.

The frequent result of such situations is the weakening of both the modern Western reforms and the traditional institutions and values, so that demagoguery becomes rampant and effective political movements to either the old or the new are impossible. Then, to prevent chaos, a military dictatorship takes over under the verbal façade of a constitutional democracy. Wonderful liberal speeches are made in the United Nations while a general, in office because of a military *coup*, rules at home. Lebanon, with its sensitive and able, Western-minded Dr. Charles Malik, in the United Nations, is one contemporary example. Thailand comes very close to being another. Chile is a third. Egypt has been a fourth. And so one could go on around most of the non-modern Western world.

But to see this prevalent political disease in all its stark realism from the standpoint of sociological jurisprudence is also to become aware of its cure. Since Western ways presuppose Western living law values, and since the natives of the undeveloped areas want the democratic, economic, and political fruits of these Western ways, we and their native leaders must not encourage the native people to introduce Western practices without at the same time bringing in the Western mentality and philosophy that are necessary to make the Western ways effective. The scientific and philosophical concepts of the ethics of the Western law of contract must be put, by their free choice, into their minds and hearts while Western practical ways are made habitual in the muscular responses of their bodies.

That this can be done is shown by the experience of the Stoic Romans. They introduced the new Western law of contract and its positive ethic that moral man is universal, rather than family or tribal, man. Clearly this new positive law, which the Scaevolas created, did not correspond to the living law of the societies of Greece and Rome and Rome's empire at the time. The latter societies were patriarchal, village elder, city-state groups guided by hierarchical familial and tribal norms. In short, their living law was identical with the living law of the native masses in Asia, the Middle East, Africa, and Latin-America to-day. Nevertheless, this new ethics with its new type of positive social organization was introduced by the Stoic Romans in such a way that it took root. Its law of contract gradually drove out the old law of status to become the dominant living law of Western societies since the days of the Scaevolas.

[11] Harper & Bros., New York, 1954, p. 186.

But if new positive law cannot be effective unless it corresponds to the underlying living law, how was this possible? The answer is to be found in the humanists of the Scaevolas' time who came to the support of the legalists. These humanists were Cicero and his colleagues. They brought in the new mentality derived, as they tell us, from Greek mathematical physics and Greek philosophy.[12] By means of art they used it to transform the living beliefs of the people. The complete story is told in A. Vernon Arnold's classic work, *Roman Stoicism*.[13] It is these Roman humanists, guided by the mentality of Greek physics and philosophy and working beside the similarly guided Roman lawyers, who ensured that the new positive law which the Scaevolas introduced had the new living law roots in the minds and hearts of the influential masses of men necessary to make itself effective. Finally, even a new religion had to take over and Christian Roman civilization was born in which Christ came to " fufil the law ", but in a new form, the form of the law of contract in which moral and religious man is no longer family, city-state, or tribal man.

Spiritual Values and Technological Efficiency

Practically this means that native political, religious, and philosophical leaders in India and other non-Western societies must re-examine one of their present opinions. This prevalent opinion is that these societies have the true spiritual values of the world and that the West has nothing novel to teach them in the realm of the spirit. As a consequence of this error, they believe that the only thing they have to learn from the West is the Westerner's technological efficiency. By combining these supposedly merely instrumental Western values with Indian and other non-Western ultimate goal values, India's present Vice President, Professor S. Radhakrishnan, and many others like him, suppose that the ultimate good for our world will be found; traditional India's true values will be achieved with greater efficiency by means of the modern West's merely secondary instrumental values.[14] What this overlooks is that the West's practical economic and political forms and technological instruments are the by-products of a unique set of ultimate beliefs and values, and that without the latter the former will not succeed; moreover, with only the traditional Indian or Asian values the Western instrumental efficiency will be corrupted.

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[12] H. Rackman, " Introduction " to *Cicero, de Natura Decorum, Academica*, The Loeb Classical Library (Putnam's Sons, New York, 1933), pp. vii–xix.

[13] Cambridge University Press, 1911.

[14] S. Radhakrishnan, " Presidential Address ", *Silver Jubilee Commemoration Volume II*, The Indian Philosophical Congress, 1950, Madras, 1951, pp. 9–19; Paul A. Schilpp, ed., *The Philosophy of Sarvapalli Radhakrishnan*, The Library of Living Philosophers (Tudor, New York, 1952).

Were the Indian and other non-Western spiritual values able to generate the modern Western democratic law of contract with its more egalitarian type of economic and political community and its technological efficiency, these Asian, Islamic, and African spiritual values would have done so long ago. Instead, they generated family, caste, and tribe-centred, rather than constitutionally guided egalitarian, nation-focused communities, and family, tribal, and even caste loyalties rather than the loyalty to contractually constructed, constitutional Utopian doctrine before which all men, regardless of family, caste (colour), or tribe, are equal. Western ways are unique because the mentality and ultimate goal-values from which they derive are unique. The one will not be effective without the other. Indigenous, ultimate values of Hindu India, Islam, Confucian China, native Africa, and native Indian Latin-American, while necessary and true in part, will not suffice.

The converse mistake will occur, as so frequently happens, if Western and native leaders go to the other extreme by regarding the indigenous living law and its unique values in undeveloped areas as outmoded, erroneous, or unimportant. No people can slough off their cultural past completely, since their living law—its mentality and its social ways—has been built into them over centuries to form their inner personalities as well as their outer social practices. Nor is it wise that they should do so. There are factors in any man's experience anywhere which these native living beliefs and forms take into account, in many ways better and more empirically and scientifically even, than do the mentality, values, and ways of the traditional West. As has been suggested above, in aesthetic sensitivity to impressionistic immediacy and in existentialism, the modern West is discovering meanings and values that are native to non-Western cultures. Science and philosophy, therefore, as well as practical wisdom, require that men the world over see their task in the contemporary world as that of creating a fresh synthesis of the native and the foreign mentalities and ways.

But if, as has been noted, these differing ways are in part at least incompatible, how is this to be done? Two things are necessary. The first is an international legal and political community which will give the native peoples the time to carry through such a deep-going and long-range task. The second is that the native leadership draw a distinction between the basic, underlying living spirit and mentality of their own culture and its dead, outmoded applications. Often only the latter is incompatible with Western mentality.

The principles of international law and politics and of national foreign policy necessary to achieve the first of these two immediately practical requirements have been indicated elsewhere.[15] Suffice it to

[15] Northrop, *The Taming of the Nations*, *op. cit. supra*, Chapters 14 and 15.

say here that these principles require that non-Western, as well as Western, peoples assume their share of the world community's policing that is necessary to protect native peoples, once they throw off imperialistic control, in the ordering of their lives in their own way. Otherwise they will have neither the time nor the protection from outside interference that are necessary to work out the difficult task of combining their valid indigenous values with the Western spirit and its ways.

To distinguish the dead, outmoded forms of their own society from the valid portion of its underlying living spirit, native leaders must, after the manner of Iqbal of Lahore, give as much attention to the basic religious and philosophical classics and mentality of their own culture as they give now to the democratic types of legal and political constitutions and five-year economic reconstruction programmes which they copy from the modern West.[16] Moreover, after having, in this manner, found the lasting living beliefs in their own culture, these must be related to the equally ultimate basic beliefs and values of the West in a fresh, consistent, creative synthesis which draws upon both as ultimate goal values.[17] Only thus can the demands of the masses of men throughout the world for political autonomy and a standard of living equal to that of peoples in the modern West be satisfied.

This is a tremendous undertaking. It requires depth of thought and breadth of feeling. It entails a stretching of the moral and intellectual imagination beyond traditional limits and the present demands for quick results. Nevertheless, this is what native leaders in undeveloped areas choose when they try to give to the millions of their fellow countrymen the democratically distributed medical, economic, and political well-being they see their modern Western brothers in greater part enjoy. Nothing will be gained by bitterness and disillusionment by making them or ourselves believe the task is simpler or easier than it is. Everything in this world has its price, and such is the price of these things.

F. S. C. NORTHROP.

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[16] Sir Mohammad Iqbal, *The Reconstruction of Religious Thought in Islam* (Shaikh Muhammad Ashraf, Lahore), 1951; also see Northrop, *The Taming of the Nations, op. cit. supra,* Chapters 7 and 8.

[17] For another instance of how this can be done, see Chapter XII in Northrop, *The Meeting of East and West, op. cit. supra.*

PART TWO: AN INDIAN VIEW

TECHNOLOGY has been defined as the science of the industrial arts: a definition that suggests technology is a branch of pure knowledge, that its main purpose is to inquire and know; explore and discover. More usually, however, its practical applications are regarded as more important, probably because technological inventions affect the life of men more than anything else. Here, technological development is regarded as being not only the application to industry of the knowledge of things and processes of nature, but also as having an impact on man as a social being.

The momentous invention of the steam-engine ushered in the Industrial Revolution, immediately affecting the distribution of goods, commerce in general, and eventually the whole economic life of man in the West. Huge factories were built, necessitating the raising of capital; a class of big investors and another of factory labourers arose; goods were produced more cheaply than by cottage industries and handicrafts. Though the average man was not directly concerned with the raising of capital, yet the production of cheap factory goods and the formation of a labouring class changed the pattern of his everyday existence and life. It was the beginning of the end of feudalism. The transfer of village populations to urban areas, the break-up of families, a new pattern of relation between the employer and the employee, all these caused permanent social changes.

Mental Climate of the Renaissance and Reformation

The Industrial Revolution and technology, however, altered not only the face of society but also the minds of men; man's view of himself, of society, of the mutual relation between them, and above all, his sense of value. For an explanation of the rapidity with which the new mentality gained ground, we have to go back to the Renaissance and the Reformation. They signified the coming of what Sri Aurobindo has called the age of the individual. In religion the organized Church claimed supreme authority: all individual judgements were not only suspect but suppressed. Yet the lives of priests often belied their preachings. Religion had become a vested interest, lost all genuine spirituality, and the need for a clean sweep was felt. The individual claimed the right to find out for himself the truth so loudly proclaimed by the officers of the Church. An understanding and interpretation of the Scriptures were attempted by a few heroic souls through the means of personal illumination and enlightened reason.

The Renaissance, in rehabilitating the essential features of the Graeco-Roman culture, had as its leading light Reason, its master impulse the study of nature, its ethical motive refined humanism. The spirit of free inquiry (the origin of modern science) re-affirmed the claim of Reason to know everything—a claim strengthened both by the Church's persistent intolerance of any progress in scientific knowledge, and by that of men in religion and in social matters. The superstition and prejudice of the Middle Ages and the cruel persecutions of the pioneers of modern science gave impetus to intellectual adventure.

In politics and society there were fixed privileges and what looked like permanent disabilities. The affluence of a few contrasted sharply with the poverty of the many. A new sense of social justice possessed people's minds, fired their imagination, and inspired many reformers to do away with the great differences. Religion and feudalism tried to suppress the spirit of protest and revolt by all the means at their disposal. But Reason in man cannot be stifled for all time and the authority of the Church was doubted, questioned, challenged, and eventually denied. Progress in scientific knowledge produced a new view of the world that was opposed to the religious one. But the denial of authority had undesirable consequences, for the claim of the individual to find for himself the truths of religion produced a welter of opinion, and a confusion of conflicting ideas in the absence of any acceptable standard of truth. Reliance on Reason in matters which were beyond its province gave rise to innumerable theories and mushroom sects. While the protest against the forms of religion and the mediation of the priest between the individual and God was justified, it ended in a denial of religion itself. The protest against the Papal interpretation of the Scriptures extended ultimately to the Scriptures themselves, because the individual, as such, found no certain light by which to discover the truths of religion. On the other hand, the passion for order and system, a legacy of the Roman mind, was satisfied by science in which the spirit of the Renaissance and the Reformation thus found its fulfilment.

But the methods of science—observation of nature and rational scrutiny—can deal only with the quantitative and the measurable. Notwithstanding, science as the successful discoverer of definite and 'certain' knowledge helped to install Reason as the triumphant goddess. The kind of knowledge science gave came to be accepted as the standard of *all* knowledge. Consequently man's mind was more and more taken by the quantitative and the measurable, so that ultimately the province of knowledge came to be confined to the realm of the senses. The sensible world was man's total world. Anything outside that was imaginary and fanciful, fantasy and illusion. God and Spirit were banished from the world of science.

The soul of man was a moonshine and deserved to survive only in poetry and the imagination of the ignorant.

Not only in the field of knowledge but also in the world of values was there a revolution. With the Biblical view of the world discredited, its scheme of values and ethics was also slighted: the next world ceased to have any attraction for men with more faith in worldly values and their realization. Naturally, they now helped to alter substantially the traditional code of conduct. This was the mental climate in which the Industrial Revolution was born and flourished.

Mechanization and Cultural Values

While the Renaissance and the Reformation should have liberated the individual, their products of science and technological development have had the paradoxical effect—perhaps it was not so paradoxical, after all—of binding him more and more, and reducing him to a mere unit of the society, determinism being the watchword of science. Increased mechanization has been one of the surest means of achieving this. Now, more often than not, the worker makes the same physical movements throughout working hours day after day. The leisure that machines give him cannot be used well and fruitfully because unintelligent labour renders him incapable of reflection and judgement. The initiative of the individual labourer in any field is bound to diminish to vanishing-point till he becomes a servant of the machine. Indeed, he starts feeling that he and his machine are one, as is so sadly exemplified by the American industrial worker who, when asked to identify himself, said, "I am nut thirty-nine." The personal relations between the employer and the employee come to an end: the worker ceases to be treated as a person. Instead of being an end in himself, he becomes as much a means as the machine, in the gigantic effort at higher production. The triumph of the capitalist spells disaster for Kantian ethics.

The denial of spiritual values, the emphasis on worldly values, the determinism in nature transferred to society and the state, all gradually helped to develop the concept and practice of totalitarianism. Whether of the Nazi, Fascist, or the Communist variety, totalitarianism is an attempt to control and regulate the life of the society—and the individuals comprising it—in all its aspects.

Even in the so-called democracies the increasing tendency towards state socialism is clearly discernible. Instead of a wide variety of personalities, which should have been the welcome result of individualism, all citizens are alike. And while they gain comforts in life, they lose richness of personality. Mechanization results in the standardization not only of things but also of men. It is the inescapable result of Industrial Revolution and technological development: in their turn the offsprings of the cult of Reason.

Secularism is the inevitable outcome of the rationalist view of life and its industrial basis. Rationalism produced irreligion in man, industry and technological development placed at his disposal cheap and attractive goods. The possession of goods became the hall-mark of prestige and dignity, the very sign of civilization. What Robinson has, Brown must also have; and Mrs. Smith cannot be happy till she has obtained the latest machine-product proudly displayed in Mrs. Jones's kitchen. On the other hand, due to the incredible tempo of modern life, the average man has no time to develop his mind, his intelligence, and aesthetic sensibility; he becomes a Philistine, with no power of judgement or discipline of taste. But literate, sometimes fairly well-read, fed upon the radio and sensational films, his brain stuffed with others' opinions and ideas, an easy victim of shibboleths and slogans, he is more unfortunate than his predecessor Philistine of other ages in being vainly proud of his so-called education and the benefits of machine civilization. Blinded by the appurtenances of outer life, and by his ability to talk glibly about all subjects under the sun, he is not even aware of his inner bankruptcy. He lives for his body and its enjoyments, for vital sensations and excitements, and consequently cannot be properly developed mentally. If culture is the growth of the higher faculties of the mind, the pursuit of knowledge for its own sake, the creation and appreciation of beauty for refined delight in it, the following of good conduct because self-discipline and control are good in themselves—if, in other words, culture is the dedication of life to truth, beauty, and goodness for their own sake—the modern man has no such thing. He has a highly developed civilization which is also painfully uncultured in its nature and quality.

Political Implications

The ownership of the means of production confers on the capitalist not only wealth and prosperity but also special privileges and powers. To consolidate these and prevent their loss he is obliged not only to deny to the middle and the labouring classes similar benefits, but to create conditions which will assure the existence of a working class. The capitalists become a class with their similar interests to safeguard, and the industrial workers are bound together by lack of the privileges and powers enjoyed by their employers. Discontent among the workers leads to envy and jealousy; to antagonism and even to enmity against the owning classes. A struggle for privilege and power against the employers ensues. To prevent the workers snatching from them—or at least sharing with them—identical benefits, the capitalists argue for not only the economical and political but even the moral and ethical desirability of their supremacy in society. Consideration of space prevents a description and analysis of these arguments, but this much can be said: most of them are hypocritical. The most revolting, is the plea that

the lower classes have no right to progress because they have neither the proper judgement nor the discernment to make beneficial use of the rights for which they fight. It is revolting because the capitalists themselves see to it that opportunities are denied the working class for the right type of education and culture that will lead to upliftment. The argument, that the members of leisured and privileged classes need the benefits that they enjoy for pursuing high intellectual and artistic activities, conveniently forgets that for one useful member of their class, numerous wastrels are produced. But perhaps nothing better can be expected of the leaders of society in a civilization in which the individual's good is more important than the welfare of a particular community which, in its turn, regards its own communal interests as the standard of social or even national good.

The working class also strikes particular attitudes in its struggle. Concentration of the means of production helps to monopolize even the power of manipulating a country's government. Legal, peaceful agitation for privilege and power—without which the injustices and indignities suffered by the working class cannot be removed—seems foredoomed to failure because the powers-that-be will not part with their vested interests. Increasing recognition of this makes the working class lose faith in peaceful methods, in the moralizing theories of charitable welfare, and goads it to accept revolution as the only means of redressing its ills. Political democracy without the control of economic power is regarded as a mockery. Force and violence are shown to be the only means of gaining the objective. The possibility of revolution alerts the capitalist; and more severe exploitation and political oppression follow. Class struggle produces venom and corrupts the whole social atmosphere. Man's sole pre-occupation becomes a struggle for and defence of power. Humane qualities are regarded as manifestations of weakness, and sordid violence promises to be the order of the day.

That political democracy has achieved sound and substantial results in some countries cannot be denied. But there, also, the benefits given to the working class and the under-privileged generally are—if not exactly charity—also not the inalienable rights of the have-nots. What a particular government has achieved by legislation is open to another to destroy. It may be said that the electorate itself—through its elected representatives in the legislative body and in the government—has the ultimate say in all matters. But the voter in the mass is fed on suggestions the true worth of which he has no real means of judging. Maybe, governmental measures in the so-called democratic countries do actually confer benefits on the working class. But, needless to say, the successful practice of democracy depends more on an enlightened electorate than on anything else: and the electorate to-day is anything but enlightened.

Technological Development and the East

What the members of a privileged class do to fortify their privileges and powers becomes a pattern of behaviour of a privileged nation confronting a less fortunate one. Ample evidence is available of how the East India Company monopolized the inland and foreign trade of prosperous Bengal by abuse of privileges given them by the Muslim rulers; how their employees, presumably with the connivance and certainly not without the knowledge of the authorities, oppressed the weavers by forcing them to sign most iniquitous bonds to supply fixed quantities of cotton on definite dates and how they paid for the products at a rate much lower than the usual. Even the English Governor turned a deaf ear to the appeals of the ruler to redress the ills. And the official documents of the Company have it on record that those who resisted the unjust methods of their employers were flogged and confined.[1] While the beginning of indigo cultivation in India was due to the initiative of the foreigner, his greed resulted in the virtual slavery of numerous families of cultivators. The latter were bound by a forward contract to supply fixed quantities of indigo cultivated on the land of the owners in return for a loan of a paltry sum of money the full amount of which was almost never paid. The contract required the descendants of a cultivator to pay off the debts of his ancestor, failure to do which resulted in the burning of their dwellings, the destruction of their cattle, and in some cases, even in loss of their life.[2] King Leopold's commendable philanthropic motive of extirpating sleeping sickness in the Congo led to his personal ownership of the rubber there, to keeping the women of native labourers who failed to collect rubber, as ordered, in the harems of government officials, to the sending of cannibal tribes to the villages of the offending labourers to terrorize them and if necessary to kill them. To prevent the waste of cartridges, the cannibals were ordered to bring one right hand for each cartridge used. As a result, in fifteen years the Congo population was reduced from twenty to barely nine millions.[3] Indeed, incidents like these were only carrying to extremes what is essentially involved in the machine civilization, affecting the ' benefactor ' and the ' beneficiary '. Both are equally (though differently) morally degenerate and spiritually hollow. The already industrialized civilizing nation is selfish and self-righteous, arrogant and hypocritical; the people being civilized—poor and illiterate, tempted by dazzling material success—are imitative and easily beguiled, cowed down with fear and even insensitive to brutality.

Increased production necessitated the discovery of new markets.

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[1] Drs. R. C. Majumdar, H. C. Raychaudhuri, and Kalikinkar Datta, *An Advanced History of India*, Pt. LII, Bk. I, ch. ix.

[2] Nagendranath Basu, Editor, *Visvakosa* (Bengali Encyclopaedia), Vol. X, article on *Nil* and *Nilkar* (Indigo and Indigoplanter).

[3] See Bertrand Russell, *Freedom and Organization*, ch. xxxi.

Improved means of communication enabled goods to be sent to distant parts of the world. Western nations travelled to its four corners in search of markets for their products. In the Asiatic countries and in the continent of Africa Western capitalists and leaders of commerce found what they sought. Admittedly these non-European countries were materially less prosperous, yet they provided lucrative markets for the Western capitalist whose wares were cheaper than most of the native products of cottage industry. Further, the Western trader—determined to create markets—resorted to all kinds of methods. Thus the Near and Far East were brought within the area served by modern industry and affected by technological development.

Not only markets but raw materials are an increasingly important factor in modern industry and therefore in international power-politics. In order to gain, or maintain, control over them, nations have fought wars and Western nations dominated many Asiatic and African peoples; exploited and robbed them of their rights; denied them the opportunities to increase their national wealth and thereby retarded economic stability and progress, political development and social advancement. To exercise their right to a good life, the Western nations have denied similar rights to a host of industrially backward peoples. Not only no idealist, but no sane man who has the welfare of humanity at heart, can deny that the ownership of raw materials rightly belongs to the people in whose land they are found. Western nations with advanced technical knowledge and skill should and must be allowed to utilize the raw materials. But they should have no claim to ownership nor a title to a bigger share of the commercial and financial results of such utilization than the capital invested and the technical knowledge employed by them warrant and justify. The discovery of raw material by Western geologists is no argument in favour of their ownership of it. Suitable prizes may be awarded and due credit given, but the ownership, if surrendered under duress to a foreign nation, must create friction, bad blood, and tension.

The argument in favour of international ownership of raw materials is an extension of the plea for equitable distribution of wealth among all in a nation. We have already commented upon the envy and jealousy, the stress and strain, the discord and disharmony, and a score of other baneful results of inequality. Apart from economic reasons for equitable distribution of wealth—namely, that it increases capital for consumption, and thus for production and eventually increases the total national wealth—the force of the ethical argument should make all thinking men seriously search for ways and means of ending iniquitous distribution. There is, however, a danger. It is well known that national ownership of the means of production and the comparatively universal sharing of the resultant wealth unfavourably affect the initiative and efficiency of

all. This has been used as a plea against equitable distribution of wealth. But it seems that the fault does not lie in the levelling up of the differences of incomes but in the character of individual workers. This point will be taken up later in a somewhat different context. Suffice it to say here that re-education of the worker about the true aim of his industry is the right solution of the problem of loss of initiative and efficiency. The East, and particularly India, now going through the process of industrialization, may be able to offer a fruitful solution.

The Western tradesman carried to the East with him not only machine merchandize but also a sense of his own superiority. He represented an astonishingly rich material civilization, had a higher standard of life, was politically progressive, knew more about nature and had a greater control over her forces and processes; these he had harnessed to the service of man through machines. He also had, or thought he had, a superior religion. The quality of his religion, so its protagonists and propagandists made out, was evident from the higher standard of life which he enjoyed and the all-round progress he made.

The white man's burden was not merely an expedient formula but also, at least in the case of some, betrayed an idealism, a genuine desire to spread the light of civilization to what were regarded as the dark corners of the world. The people there enjoyed none of the fruits of civilization, still followed mediaeval methods in agriculture, were illiterate, did not assert their own rights, and still entertained and practised primitive religious ideas and rites. So with the merchant, the missionary joined his forces. And because in the East, particularly in India, the life of the people centred round religion, their citadel of faith had to be attacked and demolished. To make the Eastern markets safe for the capitalist at home, the Western way of life had to be forced on the Easterner. Since the latter's way of life was rooted in a system of ideas regarding the whole of existence; in a vision of the purpose and meaning of life (both individual and collective); in a co-ordinated system of duties and functions for everyone—discharged for the general good of the society and involving considerable sacrifice of personal interest—cultural conquest meant the introduction of a new philosophy of life and a new religious ideal. The essential features of this philosophy were an emphasis on rights instead of on duties, on competition in place of co-operation, on individual good rather than the general welfare of society. Indeed, competition was the keynote not only in industry but of life in general.

To keep the factories going, to assure consumption of the products, discontent was praised as a virtue: the argument being that it led to greater efforts to earn money and buy consumer goods. To make the process complete, new needs were being created and luxuries made necessities. This feverish competition, together with the exaltation

of the individual, served only to make everybody selfish and egocentric. This was the ideal of life that the East was invited—coaxed and eventually almost coerced—to accept as a panacea. Actually, the story of the industrial West was repeated. Factories were built, large-scale production started; industrial labour and investing capitalist classes were created, with all their consequences.

Many thoughtful Indians saw the dangers, particularly to the morals of the people and consequently to both their individual and social life. The uprooting of families, the obligation of young men to live away from their parents or guardians (and of all men away from their community and leaders of society) and the lack of any effective check on their ideas and conduct, created a vacuum which was quickly filled by new ideas and a scheme of values that ran counter to the spiritual tradition of their land and people. Discontent with one's own lot in life was extended by an inevitable process to the philosophy and religion, the ideas and ideals of their ancient culture.

The attack against industrialism in India has come from two quarters. The unemployment of vast numbers of artisans and handicrafts-men resulting from the introduction of the machine; the ugliness of the slums in the industrial areas; the passion for excitement and cheap pleasures; the spirit of competition and the consequent lack of humanity; the denial by many of the traditional view of life; all these tragic results of the industrial civilization have shocked many poets, artists, and ethical idealists on the one hand and the conservative, orthodox leaders of thought and society on the other. To the latter anything new is anathema, to the former the dehumanizing effects of the machine civilization are enough to condemn it.

New Social Institutions and Spiritual Traditions

But there may be another approach to the whole subject. The introduction of English education in India opened up new vistas to the intelligent Indian. He also could not escape the appeal of Reason and critical methods of inquiry. The spirit of independent inquiry was developed and turned to a scrutiny of age-old ideas and institutions. Doubts were raised about many indigenous customs and practices, many foreign ones were appreciated and welcomed. The truth of the old Sanscrit saying that all that is ancient is not necessarily good and all that is new is not to be condemned outright was more clearly seen and accepted by many. Though it cannot be doubted that imitation—the sincerest form of flattery—was a motive with many to gain favours of the rulers, yet intelligent and critical appreciation of certain foreign ideas and institutions was not lacking. At any rate, Reason was allowed freer play; consequently authority was questioned though not thrown overboard.

Lest there be any misunderstanding, we should like to point out

briefly that religion never stood in the way of free inquiry into nature or in the realm of the spirit. Religion in India is not primarily a belief in dogmas, but rises directly from spiritual experiences which are at least potentially available to all, provided the requisite discipline is undertaken. The right of every soul to develop along its own line has always been conceded. Between religion and philosophy on the one hand, and between those two and scientific inquiry on the other, there has never been any conflict. Indeed, religion is the making dynamic in and for life of the discoveries of spiritual philosophy; and philosophy is the statement in terms of reason, as far as that is possible, of truths tested and verified by religious intuition and experiences. Religion itself is a result of deep psychological and psychical probing into the inner being and nature of man. Authority in religion, therefore, is ultimately based on ever-verifiable experience; an inner authority is appealed to in the last resort. The scriptures are accepted as authority because they are records of religious experiences and intuitions of spiritually awakened persons. Indeed, it is unequivocally declared in the most important scriptures that the Word of the Scripture must be transcended and direct knowledge by immediate experience obtained. While at the beginning of religious life authority is accepted by the aspirant, it is never imposed. Revolt against voluntary acceptance of authority is not necessary because growth in religious consciousness and experience naturally goes beyond it. These circumstances explain why contact with the West did not have the same disastrous effects on religion in India as religion suffered in the West itself.

Social institutions were developed to provide the right framework for the individual to fulfil his worldly life so that he could ultimately achieve his spiritual liberation: the supreme goal of life. But social institutions are only forms developed to embody the spirit and a vision of life. With the passage of time some of them are bound to outlive their utility, when the spirit behind them seeks a new form of expression. This truth unfortunately has been forgotten in India during the last few centuries, and social institutions have come to be looked upon as eternal verities. The modern mind refuses to accept them as such, and its criticism is directed to many institutions, customs, and practices of doubtful value, rather than to the spiritual tradition and ideals.

Sentimental orthodoxy fails to see that most of these institutions and customs have no living power of truth in them, that in most cases they are mere conventions: that, historically speaking, many of them are not really contemporary with the beginnings of Indian spiritual culture, but are only a few centuries old and brought about by special local and temporary conditions. Indian society has never been static, its dynamism and vitality have met the exigencies of new situations and absorbed many things that seemed not in strict accordance with the tradition of the country.

Culture has been described as an expression of a consciousness of life which is formulated in three aspects. "There is a side of thought, ideal upward will and the soul's aspiration, a side of creative self-expressive and appreciative aesthesis, intelligence and imagination, and a side of practical, outward formulation."[4] Philosophy and religion; art, poetry, and literature; society and politics are the three kinds of formulations. No culture can be said to be complete and comprehensive that does not in some measure combine these three elements. Indian culture is essentially spiritual in that it has looked upon life as a field for the cultivation of the spirit, and also for the expression of spiritual intuitions through philosophy and art, and through social activities including the economic.

The protection of this culture—in the sense of keeping alive this ideal and sense of life—is supremely desirable. But to assure that, it is not necessary to avoid all contact with foreign cultures. To protect the culture by trying to save all social institutions and customs, conventional manners and practices from the influence of another culture is neither possible nor desirable. It is not possible because the signs of change, though appearing under the impact of foreign influence, are really the results of much deeper causes. The imperative need of the individual to assert himself and exercise his right to ask and inquire, to experiment and find out for himself the truths of life—because many that were proclaimed as such did not have any real truth left in them—inevitably ushers in a period of doubt, questioning, challenge, and denial of authority. Much that is old, and a mere conventional drag on progress, will crumble and break down—indeed, the process has been there for some time, as it was on many occasions in the past—and new ideas and institutions take its place. This in itself should not cause alarm. For so long as the spirit of the culture is not forgotten, so long as the progressive mind does not commit the mistake of not reconciling the novel with that which is of true and abiding value in the tradition, it is a welcome process. If the individual must deny the authority of something whose only title to authority is age, he must do it. But let him beware of following completely the half-light of Reason. He must go deeper and find in him the light of the soul and spirit. Only thus will he find the right solutions of modern problems, solutions not at variance with the inner being and spirit of his motherland. "Confronted with the huge rush of modern life and thought, invaded by another dominant civilization almost her opposite or inspired at least with a very different spirit to her own, India can only survive by confronting this raw, new, aggressive, powerful world with her fresh diviner creations of her own spirit cast in the mould of her own spiritual ideals. She must meet it by solving its greater problems—which she cannot avoid even if such avoidance

[4] Sri Aurobindo: *Foundations of Indian Culture*, Ch. 2.

could be thought desirable—in her own way, through solutions arising out of her own being and from her deepest and largest knowledge.[5]

Since contact with the outside world cannot be avoided, India must learn to absorb and assimilate foreign influences into her own life and system. But assimilation is a vital function of a living organism which, though taking something to enrich itself, rejects also something that cannot be taken in without some injury to itself. Truly, it is not going to be easy to take only the good features of industrialism and reject its moral discord and confusion, its inhumanity and soullessness. Obviously the possibility of removing hunger and disease on a very large scale and of giving more leisure to everybody to develop his mind should and must be given a fair chance of success. But the mentality produced by industrialism in the West must be rejected. It should be possible for India to do that because the ideal of pure spiritual experience, supremely satisfying and sustaining, has never ceased to be realized even if by a few mystics only. Their example is a concrete demonstration of other than the merely material values, which economic and political values fundamentally are. And the ordering of life should be such that, if not the realization, at least the acceptance of these superior values is not allowed to go by default. The very acceptance of values higher than the material ones, it may be reasonably hoped, will soften the sharp edges of murderous competition which have become the universal features of modern life.

The reaffirmation of certain other ancient ideals may also help. For example, the Indian philosophy of work was that it should contribute to the welfare of the whole man, to the integration of his personality. Production was not for profit but for the use of society. The reward of the worker irrespective of the nature of his work—whether he is a *Brāhmana,* the upholder of the spiritual tradition and a man of knowledge, or a *Ksatriya,* the warrior and administrator enforcing *Dharma* (that is, ethical and social laws), or a *Vaisya,* the producer and distributor of wealth, or a *Sūdra,* the manual servant, his reward is the joy in the work. Certainly a man's function provides him with his livelihood, but his function is not merely his job but his vocation. It is a means of his moral growth. Workers in the factories and other walks of life can still have the same ideal, and successfully practise it if their sense of value is what it should be.

In the joint-family system, even distant relations were welcome to live under the same roof. To look after anybody who had any claim to be regarded as a member of a particular family was considered a duty. But everybody in such a family contributed his or her share,

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[5] Sri Aurobindo: "Indian Culture and External Influence," *ARYA,* Vol. V, p. 494.

in the form of either money or labour, not only in return for the physical necessities but also because it was a duty. The family was the community in miniature. But as it sometimes happens in state socialism, rights came to be emphasized more than duty; in some cases a few even thought they were giving the head of the family opportunities to practise charity and thereby doing him a good turn. This feeling naturally deadened their sense of obligation and duty, led to abuse of legitimate rights and privileges, and eventually to friction within the family. It is not necessary to comment on the lethargy and inertia which the joint-family system led to when the co-operative spirit languished and privileges were considered as rights and duties forgotten.

Charity used to be a most widely practised virtue in India. All over the country it was quite usual for families both in villages and towns to feed and sometimes to provide accommodation for anybody, including a stranger, who was in need of food and shelter. Landlords and wealthy people had regular arrangements for this kind of philanthropic activity, also many richly endowed temples made it a practice to feed a number of people daily. Modern conditions of life, however, have made and are making charity hard to practise. The social conscience is alive to the problem, and many religious organizations and charitable institutions provide charity and also facilities for hospitalization. Thus what was once a daily individual act, through which men became friends and comrades, has now taken the form of an occasional or periodical donation to a charitable institution. Industrialization and its resultant view of and conditions of life are mainly responsible for it.

People should be made conscious of values other than material, and of the possibility of their realization. A proper mentality and conduct are the indispensable conditions for such realization. This means, among other things, an acceptance of and appreciation for the right quality of intellectual and cultural activities, particularly that of maintaining and developing the spiritual traditions of the country. Due respect for the varied quality of the different types of work that different people with diverse temperament and capacity are to undertake for harmonious social living needs to be fostered. If cultural and spiritual values are properly appreciated and if economic well-being of all is assured, there will be a consciousness of everybody's part in the society, of his needs and tasks. This will lead to the abolition of the frenzied demand for rights for which there is wild clamouring irrespective of the fact that everybody does not need everything and that, as a corollary, different people need different things.

While it is true that the machine civilization is not conducive to the practice of these ideals, the fault is not of the machine, but of civilization. Civilization is a human product. That in the machine age we have not consciously tried to shape the civilization with a clear sense of what we should want, what we should cherish,

what are the right values—in short, according to a principle or some connected principles embracing the whole of life—is due to our cupidity and not to the fact that the machine is the instrument of production. It will not do to say that technological development has produced a civilization which 'is murderous, inhuman, joyless, and inane'. For, after all, the machine is man's creation, and if he did not have the foresight to make inward moral and spiritual development commensurate with the material and organizational changes that industrialism brought about, he alone was to blame. At any rate, clearly, in the non-European cultures—the orthodox protagonists of which are frantically trying to save them from all alien polluting touches—people's sense of the basic values is seen to be quite frail. It seems that even though there was considerable moral development of the average Indian, his intellectual development was sadly lacking. To seek certain values through sentimental faith in and reverence for the great men of one's country and their teachings, cannot be the same as cherishing those values through intelligent and reasoned appreciation. Contact with the West has generally quickened the intelligence of the Indian people, and with the spiritual tradition still living, it can be reasonably hoped that there will be a more rational acceptance of that tradition and all that it has to contribute to life. If there is any vitality left in Indian culture, if there are any living truths in the basic intuitions, ideas, and guiding principles of that culture, then the foreign invasion of technological development and its resultant philosophy and ethical code will not, and cannot, destroy it.

On the other hand the ideal of the value of the individual—always present as an element in Indian thought but never successfully practised—produced by democratic ideas in the minds of men and the idea of his economic and political well-being, are concepts which the Eastern cultures will be the richer by adopting and practising. Though ridiculously disproportionate to the needs of the vast population, the mechanical and technical improvements brought to India by the British administration contributed to Indian civilization. Yet the great cultural contribution by Britain has been the concept of democracy. That the welfare of the society means the welfare of all its members and not merely of one or two privileged classes has deservedly come to stay.

The Reciprocal Influences of East and West

It is not inconceivable, on the other hand, that contact with India will have brought about a change in the Western view of life. Signs are not wanting that the basic intuitions of the Indian spiritual philosophies have already entered the world of Western thought. In spite of almost fundamental differences between the Eastern and Western approaches to the problems of knowledge and life, interchange between and mutual influence upon the Eastern and

the Western mind is not only a possibility but already a reality. After all, despite certain distinctive characteristic features and persistent emphases in the East and the West, the human mind all over the world is the same in its basic structure and essential faculties. Indeed, the true spirit of scientific inquiry in the West is itself opening new frontiers of knowledge, not only of external nature but also of the inner nature of man. And a judicious exploration of the latter will certainly discover new phases and aspects, even constituent elements, of the human personality. The most progressive thought in Europe and America is already discovering that man is not merely a complex of body, life-force, and mind. There is an increasing recognition of the fact that "he is rather than has a soul".[6] Nietzsche's Will-to-live, Bergson's Intuition, James's cosmic consciousness, and the Neo-Hegelians' and certain German philosophers' discovery of a supra-rational Reality, and a host of new concepts in Western philosophy and facts in Western psychology, are a pointer to the direction in which Western thought is moving.

Along with this must also be remembered the deep appreciation shown by many Western savants of Indian spirituality and spiritual masters and of Indian culture in general. While the days of cultural imperialism are gone, the age of cultural co-operation has dawned. The re-affirmation by India of the truths of her ancient culture, together with her willingness to accept congenial truths and values of Western culture and the increasing recognition by the West of the high quality of the Eastern cultures and her own discovery of deeper aspects of human personality, are the most hopeful signs of an era of accommodation and co-operation, of reconciliation and harmony.

One evidence of the change in Western thought is furnished by the recent trends in educational and industrial psychology. It is being more and more recognized that education is a process of helping man to bring out the best in him. Also that each individual has a unique nature which must be respected. The tremendous implication is that all human beings must not be moulded in the same cast to produce an amorphous mass. Industrial psychology has discovered the truth that different people have different aptitudes, and that the capacity to enjoy work contributes towards efficiency. This is bound to result in the granting of greater freedom to—and increase of initiative of—the industrial worker and to all professionals in general—a trend which will provide the much-needed corrective to the disastrous preoccupation with quantity and rehabilitate quality as the standard both of men and their work. A most desirable effect will be the greater respect for the personality of men, leading to their treatment as ends in themselves. Kant and St. Paul may yet have their triumphs over the Kruppses and Pierpont Morgans.

The upshot of what has been said above is that we should recog-

[6] Sri Aurobindo: *The Human Cycle*, Ch. 4.

nize that man is the meeting-point of an evolving spirit and evolving nature formed in him as body, life-force, and mind. While spirit must be given its full freedom to develop, the intellectual life of man must also have the same privilege, and that his life-force, which according to Indian psychology is the means of possession and enjoyment, must be disciplined and controlled, though its legitimate demands must be met, and that the requirements of the body must also be supplied. If we must have economic socialism based on technological development to ensure the material well-being of everybody, its inherent deterministic tendencies must not be allowed to extend their tentacles to the life of the mind and the spirit. This can be guaranteed only by cultural individualism based on a fuller knowledge of man's personality and nature, and on the recognition of his deepest aspirations for spiritual peace and joy, for disinterested thirst for knowledge, and for social companionship. To this end, both East and West can fruitfully contribute with their respective spiritual wisdom and positive scientific knowledge.

Educators and teachers of mankind owe it to humanity to help develop this synthetic outlook and new-create education in its light. Both nature and nurture make a man. Let the scientist discover the truths of nature both physical and human, let the educators nurture their wards in the light of the fuller knowledge that is fast coming within their ken. It is their duty and sacred trust to help develop the future culture of the world, which will be neither militantly Western nor quiescently Eastern. It would be unfortunate if the culture of the world were to be a colourless uniformity. Not uniformity but unity in diversity should be our watchword.

The ultimate intellectual, moral and ethical implications of technological development are a new philosophy of man, reconciling the spiritual and naturalistic views about him, and harmonizing the interests of the individual, the society, the nation, and the world in general; and a new code of life which will ignore neither the spiritual and cultural nor the material values, and a society stable, secure, civilized and enlightened. The ideal product of such a community will live for and from his soul, and will not despise his mind, life, and body—a veritable god living not only in the pure spaces of the spirit silently communing with the Divine, but also in a perfected society conversing with his fellow beings.[7]

A. Basu.

[7] I gratefully acknowledge the help derived from the works of Sri Aurobindo in writing this article, particularly *The Life Divine, The Human Cycle,* and *The Ideal of Human Unity.* The following books have also been consulted: A. K. Coomaraswamy, *The Religious Basis of the Forms of Indian Society, The Dance of Shiva, Am I My Brother's Keeper?, The Bugbear of Literacy*; Sir S. Radhakrishnan, *Religion and Society,* a Fragment of a Confession in *The Philosophy of Sir Sarvepalli Radhakrishnan*; René Guenon, *The Crisis of the Modern World, East and West*; Reinhold Niebuhr, *Moral Man and Immoral Society.*

PART THREE: THE NEAR EAST

THE SEARCH FOR TRUTH[1]

THE question is not whether it will be possible to promote the economic and social development of the Arab Near East in the next fifty years, but whether it will be possible to achieve such a rapid rate of development as would not only keep pace with population growth but also raise living standards sufficiently to transform the life of the people from misery and despair to decency and hope. The question is further whether material conditions comparable to those obtaining elsewhere, such as in America, Europe, Russia, or certain parts of Asia, can be developed in the Arab Near East so as to support a vigorous culture that will make a real, positive dent upon the world.

To attempt an answer to these questions, one must at least consider certain prerequisites of rapid economic and social development in the Arab Near East. I would like to suggest four internal prerequisites and two of an external character.

The first internal prerequisite is land reform which would give the cultivator a stake in the land and transform the agrarian structure from its present state of stagnation and hopelessness to a state where free and progressive farmers acquire the incentives for raising the productivity of the soil and developing a new way of life in rural communities. The rural population constitutes the large majority of the people in Arab countries, and as long as they remain in their present degradation there is little hope for developing strong, prosperous, forward-looking, and stable nations in the Arab Near East.

The second prerequisite is an efficient government administration. In the Arab countries, local private enterprise cannot be relied upon to undertake the tasks of rapid economic and social development because its resources and experience are limited. On the other hand, foreign private enterprise (even if interested) either will not be trusted because of past experience or will not be allowed to make the high profits which it would require in return for the risks of foreign investment. The conclusion is that government enterprise, or at least government participation and guidance, is necessary in many fields of development where neither local nor foreign private enterprise would be available or acceptable. It is therefore essential, if governments are to undertake programmes and even specific

[1] *Foreign Affairs*, Vol. 30, No. 2, January 1952, an extract reproduced by kind permission of the publishers.

projects of development, that government administration attain a high degree of efficiency.

The third prerequisite is wise, enlightened, and strong national leadership. Without it no basic reforms can be carried out, efficiency in government administration cannot be ensured and maintained at a high level, capital cannot be mobilized and directed to the most productive fields of development, and the necessary efforts and sacrifices by the people will not be forthcoming.

Fourthly, one of the most important prerequisites of economic development in the Arab Near East is a social and economic order in which freedom and equality of opportunity are ensured to all members of the community; where special economic, social, and political privilege has been eliminated; and where every person will receive the rewards of his own efforts and exertions. Rapid economic and social development consciously planned and directed requires for its success the participation of the people in a democratic national movement involving sacrifices and rewards that are fairly distributed in an environment where freedom, justice, and responsibility abound.

These four prerequisites of land reform, efficiency in government administration, wise and strong national leadership, and an environment of freedom and equality of opportunity will enable the Arab countries to embark, each in its own territory, on a vigorous policy of economic and social development. To be fully successful, however, such a policy would require not only separate action, but also co-operation among all the Arab countries. Such economic co-operation is necessary in order to promote territorial division of labour, establish a wider market as a basis for industrialization, and counter the economic threat of Israel.

One final requirement which is essential for the rapid economic development of the Arab Near East is foreign, and particularly United States, economic assistance. Foreign economic assistance in the form of technical aid, grants, and loans would be needed at least in the first ten years of a large-scale programme of development in order to set the wheels in motion, to acquire badly needed capital equipment, and to help make the basic capital investments in such fields as irrigation, hydro-electric power, communications, and basic social services in public health, education, agricultural extension, and rural credit. But even if foreign assistance is not available on the required scale, the Arab countries can and should make all the efforts and sacrifices necessary for shouldering the burdens required for their economic and social development.

Ethical Implications

"Whither the Near East" is ultimately, for the most part, "whither Islam". This question raises the profoundest issues, which I shall try to face as truthfully as I can.

First it is important to note that the question concerns not only the Moslems but the entire world. For Islam is a vigorous force in the world, and therefore much depends on its development. Just as the Moslems must inquire " whither this or that system or culture ", including their own, so the non-Moslems must in this amazingly shrunk world ponder deeply and with absolute responsibility " whither Islam ". Certainly the Near East cannot be understood apart from this problem. We have all become one another's neighbours, and no man can remain indifferent to where his neighbour is tending.

And for the Christians of the Near East it is obvious that this is a peculiarly crucial issue. The fate of Islam is in a certain sense their fate. For Islam is more than a religion: it is a total outlook. Thus for the Christians of the Near East, Moslem culture, whether Arab or Turkish or Persian, is in a deep sense their culture. They have always shouldered civic, economic, political, and intellectual responsibility with their Moslem brethren. Therefore they cannot be too deeply interested in the development of their common heritage.

In varying degrees of metaphysical depth men have brooded on this issue: Toynbee has done so in England, as well as Gibb and his assistant Hourani; so has Massignon in France, and so have Hocking and Hitti in the United States; and many others elsewhere. In the Near East, Taha Hussein in Egypt and Zurayk in Syria wrestled with it somewhat. But I do not expect the final word on this matter, on the plane of theory, to emerge before many years. We are at the earliest stages of a most important cultural-historical-existential investigation. In the nature of the case, the utmost that can be done now and for some time to come is to clear the ground, lay the foundations, indicate the vast scope of the problem, suggest the sort of questions that must be gone into, and define the moral and intellectual prerequisites for any inquiry that will really face and yield the truth. It is enough if the mind is whetted in absolute love and humour and seriousness to face the issue; for truth has a way always of revealing itself in time to the inquiring mind.

The following outline only raises issues. Its suggestion of ' solution ' (an awful word) is meagre. But the very raising of an issue is itself of the utmost importance. The proper facing, the adequate description, the real understanding, the living appreciation, the honest and full apprehension—in short, the *being*—of these issues is a matter of the distant future. Whether it will be a Toynbee or a Gibb or a Hourani or a Hussein who will finally wrestle with these great questions to their uttermost depths I do not know. One thing I know: that the *whole truth* of these matters is known somewhere, certainly in the quiet bosom of eternity, and that it takes only a purity of heart and a single and sustained determination of the will to find it.

(1) Nothing is more important than to contemplate the desert and the mode of being proper to the desert, and to understand how this mode of being differs radically from that of the most temperate zones, such as Europe, where there are rain and snow and green mountains, where there are sharpness of transition and variety, and where nature is prolific with forms of life.

(2) The 'whither' we are seeking raises the prior question of the complete significance of the mentality of the *badu,* who are the inhabitants of the desert.

(3) The existence and persistence throughout Arab history of overwhelming numbers of lower classes and the absence of the middle class. Hence the phenomenon of the masses and of the mob. To please them you must in the long run cater to their imagination and desires: you must become one of them. The all-absorbing, self-avenging, overwhelming phenomenon of the mob: in the end they dominate, not you.

(4) Hence the great difficulty of being a leader, really leading and not in fact following. The ultimate tribulation of leadership in the Moslem-Arab world: you must conform. In the light of this difficulty the achievement of Mohammed appears utterly superhuman.

(5) Hence also the phenomenon of the court poet. To rule, you must employ a rhetorician or a poet or be one yourself. The incredible magical power of the Arabic language to rouse and satisfy the masses. The 'whither' we are seeking raises the entrancing question of the nature, mystery, significance, and 'whither' of the Arabic language.

(6) In one great agony of his life, Ibn Rushd (Averroes) distinguished between that which is proper to the masses and that which is proper to the intimate circle. The tragic existential significance of this distinction. The *batiniyyah* (esoterism) that follows from this dualism must mean that not everything that is hid shall be revealed.

(7) An inquiry into the discontinuities, gaps, divisions, interruptions (geographical, social, and historical) in Arab society. The distinction between the unity of community and unity by reason of an identically inherited pattern. The 'whither' we are seeking raises the question of the essence of community.

(8) The bearing of this on the possibility in Islam of compromise and modification and on real awareness of others. Distinction between real change (appropriation, assimilation, inner adjustment) and apparent change (repeating, copying, 'using').

(9) The strength and the weakness of the immense mixing of races that has occurred in Islam. The geographical determinism of this phenomenon.

(10) The ontological significance of the pull and the lure which the past exerts on the Arab. His prodigious memory and his vivid imagination. The dreams of re-enaction of exactly what happened in the past. The 'whither' we inquire into can never be deter-

mined without knowing the bearing of all this on the decision, creation, freedom, indetermination, the will, the future, real change, the perception of the objective realities of the world.

(11) The phenomenon in recent decades of 'the Orientalist'. How much good and how much harm has Orientalism done? Why a corresponding phenomenon of 'the Occidentalist' did not arise?

(12) The dearth of great works of reason, great *summas*. The important works of Moslem-Arab and Christian-Arab philosophers and mystics did not transform life and literature: they influenced West more than East. Connectedness and unity of reason soon overwhelmed by imagination, language, fatigue. Breath of reason short. If reason is the creator of the world, is there any future, whether to Christianity or to Islam, without reason being properly enshrined in the hearts and minds of men?

(13) If instinctive nature is given, can it nevertheless be controlled by reason? The order of the emotions.

(14) The question of fatalism; for, after all, the 'whither' may have no meaning at all.

(15) The significance of the repudiation by Al-Ghazzalli of cause and effect. Cause and effect in Arab life and its bearing on the 'whither'.

(16) No deeper confrontation occurred in Arab history than that between Al-Ghazzalli and Ibn Rushd in the two *tahafuts*. Here for the first time East met West internally within Islam. It has never happened since.

(17) The Christian and Moslem doctrines of revelation (*alwahi*).

(18) The problem of the pluralization of history. Is there an absolute beginning? If not, where do we start? Is it possible to compare cultures on an absolute scale? No deeper question can be asked, and therefore we cannot be too careful in answering it.

(19) Now the 'whither' means asking, questioning, wondering, reflecting on oneself, tearing one's clothes, beating upon one's breast, "where am I going?" This requires fundamental self-criticism. But so far, striking absence of a strong line of reformers, critics, thinkers, prophets, rebels. There is room for a hundred Mohammed Abdou's: kindled by one another, building upon one another, absorbing, and reflecting one another, criticizing, reinterpreting, creating, departing from one another, accepting profound spiritual responsibility. The 'whither' is a function of the joy of free, grounded, responsible reflection and self-criticism.

(20) Nature and destiny of man; the individual human soul; immortality; reason, nature, rebellion, vision, joy; freedom of thought, of being and of becoming.

(21) There is an amazing ignorance of Christian literature, doctrine, and life, despite the fact that Christ and His Mother are deeply revered by Islam. There isn't a single Moslem scholar in all history, so far as I know, who has written an authentic essay on

Christianity; whereas Christian scholars, both Arab and non-Arab, have written authoritative works on Islam, and on other religions too. Inquiry into the mystery of this estrangement. There will always be fear, uncertainty, embarrassment, uneasiness, lack of joy, lack of freedom, a predisposition to self-defence, until this intellectual and spiritual balance is redressed.

(22) Islam explicitly grounds itself in the Judaic-Christian tradition, and conceives itself as completing and sealing that tradition. There is room here for a responsible investigation into what it has adopted and what it has rejected from this tradition, and into the sort of Christianity Islam came in touch with. Since the Christian tradition persists independently of Islam, and in all likelihood is not going to be displaced, it is obvious " whither Islam " is inseparable from " whence Islam ".

(23) In this connexion the infinite importance of the history of the seventh and eighth centuries, particularly in regard to the relationship then and afterwards between Islam and the Graeco-Roman-Christian-European synthesis.

(24) Three central Christian doctrines are repudiated: the Incarnation, the Cross, and the Church. Significance of this repudiation for the ' whither '. Suffering then is not of the essence, personal sin need not be atoned, the divine does not take the form of an actual, total man. The fact of the Church raises the tremendous question of the difference between the Christian and the Moslem conceptions of history.

(25) Contemplative existence in Islam and in Christianity. The recent growth of contemplative orders in the West. Inwardness, interiority, contemplation, pure vision, asceticism, in Islam.

(26) An inquiry into the ontology of Moslem art.

(27) An inquiry into the possibility of the separation of state and religion in Islam.

(28) "Whither Islam" must depend in part on how much the Christian and Moslem worlds can in this materially and existentially interdependent world sit together and inquire, on the deepest possible plane, through their scholars and thinkers, in all patience, humility, love, and openness, into the truth of Christianity and the truth of Islam, and into their common spiritual and temporal problems. Nothing is more crucial for the future of Islam, and indeed for the history of the world, than to provide objective, political, social, and existential conditions under which this intellectual and spiritual getting together can fruitfully take place.

(29) The growth in recent years of Western interest in Islam and the Moslem world. The phenomenon of institutes of Islamic and Near Eastern studies in the United States. No greater service can be done the cause of truth, understanding, peace, and concord between East and West than the promotion of these institutes. Distinction, however, between dedication to truth alone and the utiliza-

tion of historical, sociological, and economic information for political and commercial purposes. Truth the only saviour of the world.

(30) There is room for twenty first-class universities in the Near East, where the disciplined mind can range all subjects in absolute freedom, joy, and responsibility. No greater service can be done the Moslem world, and in the end the cause of understanding between East and West, than the promotion of liberal education in the Near East where the humane tradition, both of Islam and of the West, can be vigorously brought to the fore, and where freedom of thought and inquiry and a complete trust in the life-giving power of the truth penetrate the atmosphere on every level of existence.

(31) On the level of the universal, and therefore of truth, peace, and understanding, the following five great achievements of the Moslem world in the ages of its greatest brilliance cannot be stressed enough: the humble receptivity of important thinkers and seekers to the truth of cultures outside their own; the great achievements of Arab science, especially in mathematics, physics, astronomy, and medicine; certain brilliant achievements of Moslem theology (*al-kalam*); the wonderful line of Moslem-Arab philosophers; and perhaps on the deepest level the unbelievable spirituality of certain *sufis*. The 'whither' we are seeking is in my opinion largely 'whether' these five solid achievements can be rediscovered, re-appropriated, reinterpreted, developed, and perfected. If only Ibn Rushd and Jalal-al-Din Al-Rumi can be loved, understood, and transcended!

(32) The greatest single intellectual thing that can happen in the Arab world is a responsible movement for publishing in Arabic one or two hundred volumes of the world's finest classics, both from the Moslem-Arab and from the Western traditions.

(33) An inquiry into dependence and independence: on every level—political, geopolitical, economic, cultural, historical, intellectual, spiritual. Meaning of justice and equality in an order of inter-dependence. The Aristotelian principle of the priority of actuality.

(34) The complex relationship between the existentially strong and the existentially weak. The free obligations of the existentially strong.

(35) The *Logos*, the Word, the intermediary between God and man in Christian and Moslem theologies. The significance of the rejection of the Trinity.

(36) Is a Christian Arab possible? Is a Christian Arab culture possible?

(37) Has there been sufficient love and concern for the Moslem-Arab world? Have sufficient tears of love been shed in its behalf?

(38) Where are these things fully and responsibly discussed and faced: discussed not spectatorially, but with a view to the truth, and faced not inquisitively, but in absolute love? Can objective material and human conditions be developed whereby the mind will be able

to articulate the truth of these questions in a manner that will live for a thousand years?

These are the topics that the question " whither Islam " seems to me to involve. It is very well for people to be ' interested ' in the Near East. It is very well to think in terms of independence and of economic and social advance. But politics and economics will lead absolutely nowhere until these deeper issues are faced. Well-meaning goodwill need not wonder why it does not always succeed: it must first open up these horizons and acquire an existential grounding in them. The degree of superficiality with respect to the Near East, both in the Near East and in the Western world, is simply astounding. It is an expression of the crisis of the West.

Western Influence

The Western world is responsible for the situation in the Near East on every level of that situation. In the end this is an exemplification of the *Western* principle that " unto whomsoever much is given of him shall be much required ". Near Eastern existence is largely derivative from or a reaction against Western existence. One can set up a one-to-one correspondence between the problems and great crises through which Western civilization has gone during the past centuries and the reflections these problems and crises induced in the life of the Near East. The Near East mirrors, by deposit or by reaction, the problems of the world. Whatever face the Arab East shows to-day is fundamentally a reflection of the face which the West has shown it; and whatever weaknesses the Arab East exhibits are largely an expression of the weaknesses of the West. In a deeper sense the problem of the Near East is the problem of the West.

On the one hand there is a reflection of some of the virtues of the West: the beginnings of a new administrative structure, of social and health services, of an improvement in standards of living, of great public works (e.g. in Egypt and Iraq), and of a revival of learning (largely due to Western schools and books). In all this we see reflections of the great dominating ideas of the modern West: order, health, worldly happiness, science, social consciousness.

On the other hand, the Arab East shows another face: the existence of a million Arab refugees, deep divisions between the various Arab states, estrangement between the Arabs and their neighbours (hostility to Israel, suspicion of the Turks, indifference to the Persians), the growth of tension between Judaism, Christianity, and Islam, the lack of progress towards social justice (it is not certain that social organization to-day is more just than it was before the coming of the West), and above all a universal and profound hatred of the West (although this does not prevent friendly personal relations and the desire to obtain new and efficient tools of thought and action from the West).

To say that all of this is due simply and purely to the West is of course nonsense. There is fundamental superficiality, negativity, unreality, darkness, distortion, and error in the Near East, which made all this in the first place possible. Unless these defects are brought to the surface and remedied, there is no hope for us. East and West can come together in peace only if they repent together under transcendent judgement.

With these qualifications, of what can we accuse the West?

(1) Lack of Unity—The Strife and Rivalry of the Western Powers. This led not only to the weakening of the West, but also to the divisions and rivalries among the Near Eastern states. I do not agree that Western lack of unity is a good thing for us, for I refuse to believe that the West can only reach agreement upon our corpse.

(2) Lack of Responsibility. Failure to accept the fact in all honesty that they were responsible for shaking the whole life of the Near East. No long-term planning; day-to-day opportunism; hence no stable political life in the Near East. In particular, the instability due to the alternation in British policy between interference and non-interference: interference when a Western interest is at stake (e.g. oil and Suez), and refusal to do something—under the pretence that the states are independent—when what is involved is merely the welfare or interests of the peoples themselves. All this bespeaks half-heartedness in facing up to one's responsibilities.

(3) Lack of Sincerity. There has been from the beginning an element of hypocrisy in Western policy: Napoleon's claim to be the protector of Islam, the use of Christian missions for political ends, the use of minorities by all Powers, a façade of morality given to the mandate system when, as a matter of fact, it was decided upon for quite other reasons, the invoking of moral principles to justify their own actions and the ignoring of them when they were inconvenient, and so forth.

(4) Lack of Understanding of the Deeper Issues at Stake. In particular, failure to understand that all political problems in the Near East are interwoven with religion, so that a true attitude to those problems can rest only upon a basis of true doctrine, and a false attitude to them will have disastrous effects upon the whole relationship between the great religions. The West did not offer the highest goods of its positive tradition, but the false gods of modern Western civilization: nationalism, materialism, Communism. Thus the Near East has been given the choice between embracing the falsehoods of Europe and falling back upon its own inadequate past.

(5) Lack of Love. Strategy, commerce, exploitation, securing an imperial route: these were why the West for the most part came to the Near East, not because it loved us. Add to this the immense racial arrogance of modern Europe. The West has not been true to itself, and therefore it could not have been true to us.

This sad, privative face is of course not the authentic face of the

West. But it has called forth in the East its exact unhappy image. One can show that if there is lack of unity, lack of responsibility, lack of sincerity, lack of understanding, and lack of love in the Near East—the Near East caught on these things largely from the West. The disturbing rise of fanaticism in the Near East in recent years is a reaction to the thoughtlessness and superficiality of the West. When you are not loved, what is there to prevent you from hating yourself and the world? There is no escape from the fundamental metaphysical principle that actuality is in every way prior to potentiality, and that the latter takes on the form of the former.

In all this we are really touching upon the great present crisis in Western culture. We are saying when that culture mends its own spiritual fences, all will be well with the Near East, and not with the Near East alone. We are saying it is not a simple thing to be the heir of the Graeco-Roman-Christian-European synthesis and not to be true to its deepest visions. One can take the ten greatest spirits in that synthesis and have them judge the performance of the Western world in relation to the Near East. The deep problem of the Near East, then, must await the spiritual recovery of the West. And he does not know the truth who thinks that the West does not have in its own tradition the means and power wherewith it can once again be true to itself.

Those who live and die in the Near East (and in certain parts of it more than others), namely those who suffer our existence from within, are granted the opportunity—which very few of them seize—of beholding something eternal, of seeing right before their eyes the deepest problems of humanity almost in shimmering physical embodiment. Elsewhere these problems certainly exist, but they are usually *resolved* one way or the other, rightly or wrongly, or else they are judiciously covered up. But with us they remain in eternal suspension, as though there must be one place in the world to remind us all of the essential problematic character of human existence, of the utter folly of 'resting in peace' where we have cleverly covered up our problems or supposed that we have 'solved' them.

The great moments of the Near East are the judges of the world. The Near East is of course to-day utterly unworthy of them. But it is these moments alone, properly understood, that can bind East and West together, in judgement and in truth. What is the ultimate trouble with the world to-day? It is the loss of the dimension of transcendence, the fact that the world hugs itself in happy self-sufficiency; it is—to use the concept of a certain modern philosophy—the belief that the world is self-creative. But the one message deposited by the Near East in the whole of its history is the absolute negation of this belief. There is an original transcendent order, full of meaning and power, open to the faithful and pure: an order creating, judging, disturbing, healing, forgiving. The Western

world to-day is disturbed by the challenge of Communism. But this is nothing; for Communism will pass away, and so will 'heaven and earth', but the vision and world of the Near East will never pass away. In fact, Communism with its radical immanentism is a challenge only because the transcendental challenge of the Near East has long ago overcome the West and will never let it go. Only as the West comes to the cradle of its civilization, recognizing in all responsibility, truth and love the relics of its origins; and only as the Near East regains a glimpse of its own lost transcendent visions, casting aside all doubt, negativity and childishness, and clasping of hands with all those who first drank from the well of its life: only as these two movements reach for and meet each other can peace and righteousness come, not only to the Near East but to the whole world.

CHARLES MALIK.

SECTION II

CULTURAL CHANGE

HERE the social settings in which economical and social development programmes operate are examined. Under *Towards Modern Societies,* Dr. Little, a social anthropologist, discusses, in a general article: detribalization and the growth of large towns; the adaptation of native peoples to new conditions and the creation of new institutions; the development of fresh social needs, new incentives, new loyalty patterns, and the effect of specialization on family life. Changes which create problems such as adjustment of the individual to life in 'two worlds' and of the destruction of existing social systems and ethical standards. The impact of technology is either to improve in degree existing economic practices, principally those of agriculture and cottage industries, or to change through the development of factories the economic basis of life. Case studies have been selected not only from pre-Europeanized tribes such as the Ovimbunda in Angola but also from highly industrialized nations such as Meiji Japan and the Soviet Union to illustrate these aspects of the situation. Some accounts are of successful adaptation, others serve to illustrate the resistance factors to cultural change. The second subsection, *Agriculture and Rural Life,* is concerned particularly with changes in degree rather than of kind: the educational techniques of improving agriculture and rural life are described and some fundamental problems connected with improvement are discussed. In the third subsection, *Adjustment to a New Technology,* the case studies indicate the effect on social life of industrialization. Of these, the account of the Meiji Restoration might serve as a yardstick. For the technological and educational implications of the decisions taken by the political advisers of the fifteen-year-old-boy Emperor Meiji—restored to the Throne in 1868 following the collapse of the Tokugawa Shogunate—were staggering. Purchase of arms abroad, and the importation of foreign military missions would not suffice to defend their own weak and feudal country from militant European nationalism. For such a policy would inevitably make them lag behind the West and put them at the mercy of foreign sources. Only by creating their own military machine could they hope to compete. To do so, they would have to create a modern technology to feed the machine and a modern education system to feed that technology. The emotional and spiritual drive to sustain the people in their hardships during the feverish implementation of the programme was provided in *Kokka Shinto,* the official national

cult, with its emphasis on perpetuating the Imperial Family and Way. They created the educational system, one of the most universal and efficient of any modern nation. They built their technology and won their gamble of political survival. Dr. Chitoshi Yanaga, the author of the article, received his advanced training in the United States, and long a student of the history of Modern Japan, his volume *Japan since Perry* describes the brilliantly successful transmission of Western technology to an Oriental state, and the cultural adjustments made necessary by that change.

THE EDITORS.

TOWARDS MODERN SOCIETIES

CHAPTER ONE

FROM TRIBALISM TO MODERN SOCIETY

THE impact of Western industrial society on the primitive cultures of non-literate peoples is a subject which concerns the student of world history as well as the social anthropologist. This impact has taken many forms—warfare, commerce, evangelization, exploration, and European settlement. It has involved the enslavement and coercion of native peoples as well as their voluntary co-operation. It has resulted in the introduction of new values and incentives, particularly the desire for a materially higher standard of life, into native cultures. And in places where European settlement has occurred on a large scale, either a virtual disintegration or a considerable modification of the native social system has resulted.

The facts of 'culture contact', as the juxtaposition of differing peoples and cultures occupying the same territory is popularly known, are easy to ascertain and describe, but difficult to analyse. This is because of the absence of common ground between the respective social aims and goals of Western and of tribal and non-literate peoples, and because there are few methods of measuring social achievements which are valid for both parties. Also, there are frequently colour bars and other barriers impeding amalgamation and assimilation, and many native people seem to abandon their tribal heritage without finding a new social niche for themselves. It is for these reasons that the expression 'de-tribalization' has been coined to describe the effects of Western contact on native society. A person is held to be 'de-tribalized' when he resides permanently in an area other than that of the chief to whom he would normally pay allegiance, is independent from rural relatives for support or for the performance of ceremonies connected with the major crises of life, and has ceased to identify himself with his tribe and fellow tribesmen. Obviously, however, there are degrees in 'de-tribalization', which vary from a very partial to an outright disassociation from the tribal system.

Another way of looking at 'culture contact' is to regard the social changes taking place as an historical process of adaptation to new conditions. The most significant factor in this process is the adoption of Western currency as a standard of value and medium of ex-

change in the native culture. The use of money in transaction between fellow tribesmen introduces an element of sale which, in turn, depends on the existence of a market determined, in the last analysis, by a Western system of economic evaluation. Consequently, the changes are as much a process of civilization as of ' de-tribalization ' because they involve the habits and activities of the native people within an institution of civilized society. The severing of tribal ties and loyalties has positive as well as negative significance for native life. The African who gives up visiting his tribal village or who ceases to participate in traditional ceremonies does not retreat into a social vacuum. If he did so, we should have to describe him as a hermit, not as ' de-tribalized '. Instead, he becomes a member of new social groups, participating in their activities with other ' de-tribalized ' native people and, sometimes, with Westerners.

South Africa, where the ' de-tribalization ' of native society is particularly advanced, provides a good illustration of this point. Not only has the whole material basis of Bantu life been revolutionized—clothing, furniture, housing are completely Westernized—but a large number of Africans now living in Johannesburg and other South African cities have almost completely severed their relationship with their chiefs. These Africans have adjusted themselves to their urban surroundings in some instances by forming new institutions. Thus, in Johannesburg, the Bantu population has economic organizations, such as the ' stock fair ' and *mohodisana*, which are run by members of different tribes. The ' stock fair ' is an association of women brewers of beer. Its primary function is as a kind of savings society. Dr. Ellen Hellmann has described how the members of the ' stock fair ' gather every week at the room or house of a different member, who becomes the ' owner ' of the ' stock fair ' for the occasion. Each member pays a small weekly subscription, which the owner retains. Beer is served by her free of charge to members, but visitors are also welcomed, and for an entrance fee are allowed to drink their fill. The *mohodisana* is a somewhat similar institution. In its simplest form it is ' an association of friends ' who contribute a weekly or monthly amount, which is handed over in a lump sum to each in turn. In Pretoria, there has been a further development of this institution, and it is taking on the functions of a provident society. It gives help and support not only to members in trouble, but also to their families. South African native people living in urban locations also have other organizations such as athletic associations, football clubs, a Probation Society, and a committee responsible for organizing annually a children's picnic, in which tribal bonds play no part whatever.[1]

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[1] Cf. Ellen P. Hellmann, "The Native in the Towns", *The Bantu-speaking Tribes of South Africa*, ed. I. Schapera (London, 1946), pp. 405–29.

The response of native South African peoples to Western contact has also taken a nativistic form. This is exemplified by a large number of Bantu Independent Churches which combine evangelical Christianity with old tribal rites and practices. There are two main types of Bantu church—the 'Ethiopian' and the 'Zionist'. The church organization and Bible interpretation of the Ethiopians are largely copied from the patterns of the Protestant mission churches from which they have seceded, although these patterns have been modified by African stress on rank and ritual. Descent from or relationship with a royal clan is a main factor in church leadership. The leader, whether 'bishop', 'overseer', or 'president', is a king, and the church is his tribe. Zionist leaders, too, are eager to claim that they are of royal blood, but the Zionists also include healing, speaking with tongues, purification rites, and taboos as the principal expressions of their faith. These practices devolve mainly from the native belief in medicine and divination. The diviner is a man or a woman who has been possessed by an ancestral spirit; and an important part of the role is to cure illness and detect witches. In the Zionist movement the prophet-diviner receives his call through dreams and visions, roves the country without fixed abode, and preaches his apocalyptic message.

The Old Testament provides a foundation for the beliefs of these Bantu independent churches, but their theology reflects native resentment of European policies of racial segregation. For these Bantu people, Christ is a black man who has the power to open and to shut the Gate of Heaven. The white people are turned away because they, as rich men, have already received their good things: and in the parable of the foolish virgins, the wise virgins are black and the foolish virgins white.

The Mechanism of Social Change

What these new movements imply is that the process of 'culture contact' is simultaneously one of re-integration as well as disintegration in which a particular form of social organization is added to, or replaced, by other forms of organization. It means, in other words, that Western contact brings into being fresh social needs whose fulfilment requires fresh forms of group activity and co-operation. Very often, in the old tribal system, the extended family or the local group which tills the soil is also responsible for the religious beliefs of its members. An individual's life is centred mainly on the particular kinship group or local community to which he belongs. His livelihood and his general well-being depend on their approval of his actions. The introduction of a labour market and the conversion of some members of the native population to Christianity tends to alter the personal basis of tribal relations by introducing a contractual element into the indigenous pattern. The cultivation of a farm, say, which was previously carried on by per-

sons co-operating on the basis of a common interest in their relations by kin or marriage, is now carried on by a group of persons co-operating on the basis of a common interest in the wages earned. Or the religious worship which was previously carried on by a group of persons co-operating on the basis of common interest in their relations by kin and marriage is now carried on by a group of persons co-operating on the basis of a common interest in propitiating a Christian deity.

The latter case illustrates the fact that problems of 'culture contact' are best appreciated in terms of the resulting institutions rather than in terms of the cultures or social systems held to be impinging upon each other. The problem is not what is 'Western' or what is 'native' or 'indigenous', but rather what is relevant in terms of social groupings and relationships. It is the interaction of individuals, regarded as participants in various new political, economic, and other institutions, rather than as members of different societies, which constitutes the reality of the contemporary situation.

This point is most evident in areas where economic changes have proceeded furthest. The economy of South Africa, for example, is now largely dependent on African labour. In 1948 the number of Africans employed in the manufacturing industries alone was more than three hundred and seven thousand, which is some 55 per cent. of all employees. What has been established is not a European economy, but a South African economy which cannot maintain itself, let alone develop, without the aid of all the people of that country.

But the need to regard native institutions within a wider context than that provided by the tribal culture alone is not confined to areas with a long history of Westernization. The mere fact of a Western people imposing its administration on native social system is sufficient in itself to engender a novel situation. Chieftainship, for example, is one of the most important tribal institutions, and it has generally resisted Western influence more successfully than other aspects of the native system. Nevertheless, it would be idle to suppose that the structure and functions of tribal government are the same to-day as they were prior to Western contact. Even in the case of the British policy of Indirect Rule, which is a deliberate attempt to preserve native institutions, the position of the chief has been greatly modified. It is now involved in a new network of social relationships, which includes the 'de-tribalized' section of the native population itself as well as European administrators, missionaries, business men, and other non-native groups.

What has happened in many British territories is that a new political organization running parallel to the old system has been set up. Some of these new institutions, such as District Councils, are modelled on English local-government bodies, their purpose being to widen opportunities of administrative experience among the native community. These local councils form part of the

machinery of central government, but their constitution is largely a response to nationalist demands for political recognition on the part of the educated section of the native population.

Again, just as the forces of native nationalism serve to modify indigenous forms of hereditary privilege and social status, so Western commerce works in the same direction by spreading the use of money and monetary incentives. The recognition of money as a valuable commodity in tribal life makes it possible for a native individual to discharge his customary obligations through cash, thus avoiding the necessity of performing personal services. This, in turn, impairs the authority of the head of the kin group because its members are no longer obliged to earn their marriage payments and the other traditional requirements of native life by working for the local group. Economic incentives are also implanted indirectly by the operations of the Christian missions, whose main method of securing converts is through education. In colonial territories the majority of schools are run by missionary bodies; but whether a native child attends a mission school or a government one, the cultural effect is the same. He acquires various Western habits of thought and a taste for certain Western things, including food, clothing, and housing, which can be obtained only through the possession of money.

Social Change in West Africa

The social results of this cultural interplay can be conveniently reviewed in terms of the West African countries, such as the Gold Coast, Nigeria, Sierra Leone, the Gambia, and the adjacent French territories. Except on the coastal strip, the indigenous social systems of this region were relatively unaffected by the West until well on into the nineteenth century. Latterly, however, and particularly since the war, the *tempo* of technical and economic development has been very rapid. Government planning, re-settlement schemes, promotion of local industries, and greatly improved communications, as well as political development, have all added to the process. There are now many more economic activities and ways of earning a living than in the traditional occupations of farming, hunting, and herding.

The fact that most of these new opportunities are centred in towns, in the neighbourhood of towns, or in localized industries, has induced a tremendous migration from the countryside. Fresh urban settlements have been made, and the populations of existing towns have increased considerably in both size and heterogeneity. For example, the population of Lagos, the principal city of Nigeria, rose by 80 per cent. between 1931 and 1950, and Kumasi in the Gold Coast now has more than seventy thousand inhabitants. In French West Africa, where there is a similar trend, Dakar had thirty thousand inhabitants in 1926 and some three hundred and five thousand inhabitants in 1953; and Conakry in French Guinea rose

from some thirteen thousand six hundred inhabitants in 1936 to some fifty-seven thousand inhabitants in 1950. It goes without saying that a large proportion of the people who migrate to these towns have few kinship ties with the local inhabitants. Nor have the local civic or municipal institutions developed sufficiently to assimilate them. They therefore feel no loyalty or sense of attachment to their new abode. It is simply the place where they work, whilst their social self remains located with their families in some other part of the country; sometimes even in some other West African territory. Yet removed as they may be from near relatives and kinsfolk of their own, these migrants hold on to their tribal heritage of language and custom.

These circumstances explain both the form and the function of a number of new associations characteristic of contemporary life in West Africa. Both in Nigeria and in the Gold Coast tribal organizations and unions have sprung up which serve to keep alive the migrant's attachment to his native town or village. Many of these associations also provide mutual aid and protection, including sustenance during unemployment. They help to comfort a person when he is bereaved, assist him when ill, and bear the responsibility of funerals and the repatriation of his wife and children in the event of his death. These tribal unions also fulfil several important political purposes. Amongst other things, they have been a powerful influence for the democratization of Native Authority Councils, and have provided the basic organization of national political parties, such as the N.C.N.C. (National Convention of Nigeria and the Cameroons).

Another product of urban circumstances is the dancing *compin'* of Sierra Leone. This is interesting because of its close combination of Western and native features. The dancing *compin'* is an association of young men and women formed primarily to perform ' plays ' of traditional music and dancing. The music is supplied by native drums, xylophones, and calabash rattles, and it includes singing. The dancing is partly Western, partly native in style. The ' play ' is generally performed in connexion with some important event in native life or as a part of the ceremonies celebrating a funeral or a wedding. The general public, as well as the person in whose honour the performance is given, are expected to donate money to the *compin'*. Office-bearers in the *compin'* have Western titles such as president, judge, provost, doctor, and nurse. Each member of the *compin'* pays a monthly subscription and is entitled to benefit in the event of his own illness or the death of an immediate relative. The *compin'* also looks after his interests if he becomes involved in a legal dispute. Its own rules prohibiting disorderly behaviour and other misdemeanours make it an important agency of social control in local life.

Other organizations in West Africa, which function primarily as

burial societies or for economic purposes, also have social activities; for example the Fish Sellers' Union in one of the Gold Coast towns. This is a group of women; members pay an entrance fee, and when a member dies, contributions are raised for the funeral and the union presents sums of money to the relatives of the deceased and liquid refreshments to the mourners.[2] South-Eastern Nigeria, too, has 'contribution clubs', which are somewhat similar to organizations known in Europe as 'slate' and Christmas clubs. Membership is open to men or women, and the body of members is divided into seven sections each under a headman. Each member pays one or more weekly subscriptions. The headmen are responsible for collecting the shares from their own members and for paying for those of defaulters. When the shares have all been collected, the money is handed straight over to a member nominated by the headman in turn. The recipient has a number of obligations, including that of supplying a quantity of palm wine for the refreshment of the club members.

Another factor in the urbanization of West African life is the growing specialization not only of the economic sphere, but of all the principal activities of community life, including the training and care of children, religion, and leisure. This in turn has given rise to a large variety of occupations requiring Western skills and technical or scientific knowledge. The people who fill these new roles are doctors, lawyers, clerks in government offices and commercial houses, nurses, teachers, artisans, and technicians of all kinds. They have a somewhat different outlook and way of life from the mass of the African population. They are interested in things which, like politics, sport, indoor recreation, and Western art forms, are not catered for in the native culture. As a result of their Western training and attitude, these more educated people have a relatively cosmopolitan outlook and they tend to organize associations on an inter-tribal basis, which have some Western type of social activity in view. Consequently, there are social clubs of all kinds, including women's institutes, sewing groups, literary and debating societies, dining clubs, athletic clubs, and so on. The conventional aims of these associations range from social welfare and uplift to football, but though requiring their members to be proficient in Western social skills and rituals they also serve as a means to prestige. There are, however, certain exceptions to the general rule. The Reformed Ogboni Fraternity in Nigeria is a combination of ideas borrowed from Freemasonry and the most important politically of the Yoruba cult groups. This association has a membership of Yoruba professional workers, government clerks, school teachers, and other educated people. Membership in it is important for business.

[2] [Similar organizations were formed in the Negro Communities of the South in the United States following the emancipation of slaves.—EDITORS.]

Thus, a person visiting West Africa to-day will find, it is true, much of the old way of life still intact. He will see a majority of Africans living in huts of wattle and mud daub and of grass, herding cattle, and cultivating their farms and plots with home-made implements, pounding their food in mortars, crossing rivers in dug-out canoes, worshipping ancient gods and spirits, and dancing to the music of wooden drums. But he will also find many of the trappings of a Western civilization. He will see modern harbours, he can do his shopping in some places in stores equipped with refrigeration, and spend his evening at the cinema. He can live in a home lighted by electricity and travel on trains and in motor-cars and aeroplanes. He will meet individual Africans with habits as Western as his own whose professional and academic qualifications are impressive by the highest European standards. He will also encounter some Africans wealthy enough to send their children and their nephews and nieces to school and university in Europe. This technical development, economic specialization, and social stratification of West African society involves, as yet, a relatively small section of the native population. Nevertheless, the picture is striking enough to provide a contrast with other native cultures which have experienced the impact of similar external forces.

Social Change in the Western Pacific

It will be convenient to take the region of the Western Pacific for purposes of comparison. The people of this area, too, according to Professor Raymond Firth, are now committed to the *material* civilization which is the hall-mark of the West.[3] Even on the more isolated islands of the Solomons, articles which, like mosquito nets and electric torches, used to be looked upon as white man's goods alone, are now regarded as legitimate native requirements. Near the towns, such as Port Moresby or Rabaul, there is a keen interest in a wide range of clothing, foods, toys, musical instruments, bicycles, and tools. Buildings of modern construction, using asbestos board and corrugated iron, are beginning to rise.

The growth of this demand for goods of Western manufacture is largely the result of a considerable rise in native incomes since the war. Copra, which is produced for export, was at one time fetching more than £60 a ton on a guaranteed-price basis, compared with its pre-war price which in the depression years fell at times to below £5. The native people have also discovered new ways of earning money. One method is by the supply of fish or vegetables to a cash market, either European or native. In the neighbourhood of Port Moresby it is estimated that an energetic man with a garden

[3] Cf. Raymond Firth, " Social Changes in the Western Pacific ", *Jour. Roy. Soc. Arts,* Vol. CI, No. 4909, 1953, pp. 803–19, upon which the following section is largely based.

can take between fifteen shillings and two pounds per day, depending on the season. A fisherman can get up to ten or fifteen shillings for a good mullet, from native buyers themselves. A number of New Guinea men have bought large motor-trucks with which they earn a considerable income by the carriage of passengers and goods. Other native *entrepreneurs,* owning a sailing canoe or a cutter, ply for hire along the coast. Some relatively large co-operative societies have also come into existence, the most successful of which had a turnover in 1951 of £16,000. As indicated by payments into savings banks, individual Pacific Islanders have also accumulated a fair amount of capital.

On the political side, there has been a strong development of Native Councils in some areas, and native Pacific Islanders have been appointed to the New Guinea Legislative Council and the Advisory Council of the British Solomon Islands Protectorate.

These economic and technical changes have naturally brought into being a more individualistic type of role than exists in the native system. There are now native individuals who are middlemen in trading, petty capitalists, and organizers of the labour of others. The post of clerk to a Native Council or as secretary to a co-operative society also provides a new function for a small group of literate individuals. These people have different conceptions of the use of resources and different standards of consumption from the mass of native society, and there is a tendency for them to constitute a new social and economic class. In addition, there is also a small number of persons of mixed blood who are often media of communication between European and native society.

But the more dynamic factors which make for cultural and economic differentiation are largely lacking from the Western Pacific scene. There is a fairly widespread system of primary schools, but few opportunities for further education. The general standard of literacy is low, and ' pidgin-English ' is the only common medium of speech. The technical training offered is elementary and there is little inclination on the part of Europeans to integrate native people more fully into the technological patterns of the overall economy. The general labour market is restricted to work of an unskilled type on plantations, public works, and in the mines, and there are few alternative occupations offering a greater return or more attractive conditions.

Thus, it is not surprising that from the point of view of the native inhabitants of this Western Pacific area, economic advance is still conceived largely as community or group advance. The pattern for the working group and for the multitude of small services of daily life, even on the plantation, is still the kinship system. Communal solidarity, in other words, seems to be unbroken, although its expression takes new forms. It may show itself in the care given to the native council meeting-houses, or in the enthusiasm displayed

for even an informal co-operative enterprise which provides some concrete achievement in which the whole community can share. The occasion may be recreational as well as economic, and Professor Firth has described an interesting example of the former in the shape of a village cricket match between teams of women. Two Port Moresby villages came up to play the local side, arriving in motor-trucks. Each side had two innings, and the visitors won. Then there was a meal, provided by the hostesses, in the house of their ' cricket-master ', the captain, and the guests departed amid much display of good feeling, with formal hand-shaking, waving, and cheering. This was entirely an affair of the women.

But the fact that the native person remains attached to the basic values of his culture does not mean that the system has gone wholly unscathed. The native people's own desire to acquire Western goods and ways, as well as administrative and missionary policy, have been instrumental in the abandonment of many of the old habits and regulations. Many of the magical and other rituals have been altered, the institutions of totemism have been given up, and rules about marriage, adultery, compensation, and theft have been radically changed. In some cases a new form of organization comparable in form and function to the associational activities of West Africa has evolved. Villages have been rebuilt in lines on a military model, the people have been organized into groups, drilled with sticks, given flags, and fitted out with an hierarchy of officers, or even with kings and queens.

The most spectacular of these new movements are known as ' Cargo Cults ' in New Guinea, as ' Marching Rule ' in the Solomons, as the ' Naked Cult ' and the ' John Frum ' movement in parts of the New Hebrides. The aims of these movements vary; some are economic, some religious, and some political; but they all express dissatisfaction with the existing conditions of native life. They also attempt, using traditional methods, to get an adjustment. In both these respects, therefore, they can be likened to the Bantu nativistic movement mentioned above. Thus, the people concerned with the ' Cargo Cult ' desire material prosperity. During the war they observed how the vast wealth of the Europeans could be poured forth from ships and aeroplanes when supplies were needed for the fighting forces, and so they have likewise built wharves and air-strips in readiness. They believe that either through the help of their ancestors or the help of their magical performances they can constrain ships and aeroplanes to bring what they want.

' Culture Contact ' as a Process of Civilization

Earlier it was suggested that the results of ' culture contact ' might be regarded as a process of civilization. However, this brief description of Western impact on the native cultures of West Africa and the Western Pacific implies certain differences in the ' adaptive '

process. The native peoples of both these regions have been stimulated to demand Western goods and a materially higher standard of living. In the Western Pacific area these economic incentives have been incorporated in the native culture without very much alteration, so far, in its existing structure. Thus, new occupational and civic interests are organized on the basis of social relationships already obtaining between groups of kinsmen and other members of the local community. There has been some migration, mainly to plantations, but most of the native population have remained in their own villages, getting a living on the land and by fishing, as did their forefathers.

In West Africa, on the other hand, a new form of social organization has developed, and is taking charge of many of the functions traditionally performed by the extended family and other kinship groupings. This new social organization is based on the association of men and women having economic, occupational, political, and other interests in common, and it is mainly centred in urban areas to which, in West Africa, there has been a tremendous migration from the countryside.

However, the difference between the re-formation of native institutions in the Western Pacific and the re-formation of native institutions in West Africa is not explicable solely by the fact that patterns of settlement are mainly ' rural ' in the former area and partly ' urban ' in the latter area. West Africa had its large urban populations in such places as Ibadan and Kano long before contact was made with the West. It is rather that West Africa is becoming ' urbanized ' in the modern sense of the term. In other words, there is developing there a way of life peculiar to societies based on a culturally heterogeneous population and a relatively complex set of economic institutions. This cultural heterogeneity and relative specialization in the West African case is the result, in turn, of a much larger and more extensive exploitation by Western forces than has so far occurred in the Western Pacific. Not only are the human populations and the natural resources of West Africa much greater, but the process of exchanging vast quantities of native produce in the shape of palm kernels, groundnuts, cocoa, timber, hides, etc., for manufactured goods of all kinds has given rise to new economic institutions. In particular, a host of native middlemen and petty traders has been created. For these people the town is their natural location, as it is, also, for the native educated classes whom the task of administering large tracts of territory and supplying them with public services has brought into being.

Any insight afforded by a discussion of the social facts common to both regions has, therefore, to be qualified. It is tempting to suggest that the ' rural ' Western Pacific and the ' urban ' West African adjustment to Western contact represent successive stages in the march of native peoples towards civilization. However, such a

hypothesis could be verified only on the assumption that the contemporary organization of Western Pacific society and the contemporary organization of West African society involve relative degrees of economic integration within the Western system. This, in turn, would imply that native motives and institutions are sufficiently Westernized to be measured on an economic yard-stick. Where, then, would nativistic movements like 'Marching Rule' be placed? These movements frequently lack an economic motivation, or the nature of their activities makes it impossible, as in the case of the 'Cargo Cult', to evaluate them in economic terms. There is the further difficulty of deciding exactly what is meant when we speak of the native culture, or of a native institution, 'adapting itself'. How valid is such an expression when the course of native 'adaptation' is, in fact, largely governed by colonial or European policy? It was pointed out on a previous page that a large number of native people are employed in the industries of South Africa. To this extent they are certainly integrated within the South African economy. But the degree of their integration would probably be very much greater were it not that industrial and other forms of colour bar restrict most of the native population to less-skilled and lower-paid jobs than are available to white workers. Again, the fact that there are frequently colonial laws against the sale of native lands means that the kind of economic integration which might have proceeded through individuation of landed property is also 'artificially' inhibited.

Consequently, it is not easy to arrive at a precise formulation concerning the transition from tribalism to modern society. Each case is best considered on its own merits and in the light of the historical and other circumstances. Another important difficulty is that of reviewing social changes over a sufficient period of time. Nevertheless, allowing for this and the likelihood that certain social movements differing from the general pattern are, in fact, aberrant, it is possible to detect a fairly specific trend. The evidence from both West Africa and the Western Pacific suggests that this trend can best be summed up in terms of the increasing specialization of native society. The motive for specialization is social and political as well as economic, and it results in a re-ordering and multiplication of individual roles. As specialization increases, a native individual tends to belong to a number of social groups additional to family, clan, and tribe, including groups with whom his social relations are of a contractual rather than a personal kind. Voluntary association is a marked feature of these latter groupings.

This new social organization has its ultimate basis partly in the values of Western economics and technology. It means that the kind of activities in which a native person engages are determined less by factors of age and sex and more by factors of skill and proficiency in Western occupations and habits. It means that his general standing

in the community is decided less by native criteria and more by the things which, like monetary wealth, occupation, and education, are significant in Western eyes. It means, at the psychological level, that the mental horizon of such a person is wider than under conditions of tribalism, but his behaviour is conditioned by a dual system of values—part-traditional, part-Western, in origin.

Thus the new form of native society exists, not because of its own inherent dynamism, but because its blend of ancient and modern, and its plural communities, are, in fact, a function of a much greater entity—world society.

Education and Cultural Change

What are the implications of this culturally and sociologically transient situation for education? The answer is complicated by the fact that educational matters are largely dependent on politics, and in most of the territories concerned Europeans are the politically dominant party. Consequently, there is a strong tendency for educational programmes to be determined by the general policy adopted towards natives. In the Union of South Africa, and to some extent, also, in Southern Rhodesia, the aim is that non-Europeans shall develop on ' separate lines '. This results in a relatively large number of primary schools and a certain amount of technical training being provided for Africans, but very limited facilities for post-primary and higher education. Apart from a few specialized occupations serving his own community and the jobs he performs in mines and other European undertakings, the African is expected to obtain his living in traditional ways on the land. The education offered is to equip him for his place as an African in a European-controlled world.

However, in other places the ends of educational policy are politically and sociologically less restrictive. In British West Africa, for example, the intention is that Africans themselves shall eventually have complete control of government, and so educational needs can be viewed in a broader way. The basic problem, technical considerations apart, is that of ' cultural reconciliation '—of reconciling what traditionally exists with what is deemed necessary in the interests of all kinds of political, social, and economic development. Not only is it a matter of these societies making a hasty change from a mainly subsistence to a market type of economy, but there is also a wide discrepancy between the tribal outlook and the more universal set of attitudes demanded by modern conditions. In a Westernized society, relationships are much less comprehensive and personal obligations are felt not towards a compact body of persons, but towards people in their individual roles as close relatives and friends. In Western economic and political institutions, in particular, the whole organization of activities tends to be based on loyalties of a largely impersonal and abstract kind.

A few concrete examples of what all this involves will make the educational problem more evident. In the political field, for instance, native people whose sense of civic responsibility has hitherto been based on a feeling of personal relationship with members of their own village or clan, have to be persuaded to acquire a much wider and more impersonal notion of citizenship. Modern methods of government also cut across the traditional system in expecting the administrator and the civil servant to place his obligations as a public servant before his obligations as a kinsman. There is also the question of the industrialization needed for greater economic productivity. This means not only more machinery, but the introduction of large numbers of people to wage-labour. The implications of this conflict with the traditional attitude towards work are striking. For the tribal person regards the individual employing him not simply as someone who has hired him to perform a given job, but in a much more comprehensive way as his guardian, patron, and protector. Then there is the difficulty of punctuality and routine. These may also have to be acquired, because an individual accustomed to traditional conditions tends to look upon working for another person as he would regard doing a good turn for a friend or neighbour. He is willing to help, but not at the cost of his own convenience.

The greatest problem is in family life. This arises directly out of conflict in values. Children of non-literate parents naturally gain knowledge and ideas in school which cause them to doubt the older religious and magical beliefs of their parents. What they learn about modern methods of hygiene and health contradicts many of the habits they have been taught at home, which their older relatives still practise. All this strikes at the heart of parental control, which is based very largely on the supposed special wisdom of the older people, and on the notion, very often, that they are in a position to influence the ancestors towards the younger generation. Another difficulty arises out of the changing attitude towards marriage. The traditional view, usually, is that marriage is primarily the concern of the two families involved, the spouses being merely incidental parties to the compact. It is also customary for relatives to be consulted and to give judgement on any serious dispute affecting man and wife. Western contact, however, has encouraged the idea that marriage is a personal affair; and an increasing number of people are getting married without family consent. In some places such unions have no validity in native law and custom, and this means that another important source of social control is lost because the relatives have no responsibility for seeing that husband and wife observe their marital obligations.

It will be obvious that social problems and circumstances of this kind call for a wider and more comprehensive conception of 'education' than is customary in our own society. The salient considera-

tion is that 'culture contact' has placed the native person concerned in the position of having to live in and adjust himself to two quite different worlds. In the personal and domestic sphere, his relationships are largely with non-literate and semi-literate people, and he is expected to adhere to and to uphold tribal ideas of proper conduct and etiquette. Outside his home, more particularly at work, he is frequently involved in a set of institutions requiring him to behave according to Western canons of morality, efficiency, and good taste. Not only do such circumstances constitute a dualism, but they demand the rapid learning of new roles and an appreciation of social duties and responsibilities for which there is no training in the traditional community.[4]

Education, therefore, has a major task to perform in addition to its formal function. It is to bridge the gap between 'old' and 'new' and, in the process, to be an interpreter of cultural aims and values. However, the difficulty is that the curricula of colonial schools are generally tied up very closely with the pedagogic ideas and requirements of the metropolitan countries. Frequently, the native child is taught more about the political history and literature of a European country he will never see than about his own culture. At more advanced levels the position, with a few exceptions, is equally anomalous and fully merits the criticisms made of it.[5] There are many reasons for this state of affairs, but the fact remains that most syllabuses could be improved by a common-sense regard for the local circumstances, especially in the case of rural schools. For example, the inclusion of what is known of local tribal history, legends, myths, and folklore would make the child more alive to the implications of his traditional background and would conduce towards a better understanding of his still non-literate fellows. A place should be found for tribal drumming and dancing and other forms of native art. Older children could be given more encouragement to make

[4] Cf. Kenneth Little, *The Listener,* January 1st, 1953.

[5] Professor Melville J. Herskovits, of Northwestern University, U.S.A., who has recently made a very extensive tour of sub-Saharan Africa, writes: "It is understandable that the curricula of schools of medicine or engineering necessitate little recognition of the fact of cultural variation: a bridge to be built, patient to be cured, represent problems that, under the rubric of scientific method, are similarly approached wherever they may be. But in the humanistic disciplines or the social sciences . African values and institutions would seem to have considerable relevance for the teaching of Africans. Nonetheless, one finds professors of philosophy continuing to teach Plato, Aristotle, Nietzsche, and Bergson to the exclusion, even by so much as formal recognition, of the philosophical systems that function to regulate life and thought just off the campus and, more than they knew, on it, in so far as their students are concerned. One finds professors of comparative literature who in teaching the European classics remain oblivious to the values in the oral narrative and verse forms of the societies to which the very men and women to whom they lecture belong."—An address delivered before the 29th Institute, Norman Wait Harris Memorial Foundation, November 28th, 1953.

studies of their native towns and villages, and geography could be taught in relation to the economic activities of the neighbouring countryside. The latter training would be a means of paving the way for subsequent schemes of community development, co-operative societies, etc.

This is not to imply the exclusion of everything 'Western' that is not either technical or required for a School Leaving Examination. On the contrary, some knowledge of modern institutions is absolutely essential for the native person's comprehension of the wider world into which his society is moving. It is more a question of selecting the kind of subject and material which will be most relevant to a people in the throes of transition. It is not vital that a Melanesian or a Nigerian child should be certain of the precise year in which Queen Anne died or should be capable of analysing the metre of Victorian poets, but it is important that he should know the meaning of the changes going on around him. In this respect, therefore, there is a strong case for the study of the economic history of western Europe during the seventeenth, eighteenth, and nineteenth centuries, and for special attention to the Agrarian and Industrial Revolutions. Lessons of this kind in the social experience of other peoples would be a means of enabling the native pupil to see the problems of his own society in perspective. It would be equally valuable and relevant to teach the history of local government, and the development of the 'welfare state' in agrarian countries like Denmark and Norway, although whether the metropolitan nations would be willing to admit by implication to their colonial peoples that there are social systems outside their own imperium which are worthy of attention is another matter.

KENNETH LITTLE.

CHAPTER TWO

THE GOLD COAST

THE Gold Coast of West Africa is a comparatively small country, about the size of Great Britain or of the State of Oregon, with a population of about 4½ million. The natural division of the country is into a northerly zone of savannah or grass, and a southerly zone of forest. The forest zone, almost one-third of the whole country, produces valuable timber and cocoa, and also contains most of the country's mineral wealth, consisting of gold, manganese, industrial diamonds, and bauxite.

In the savannah zone, agriculture is limited by the shortage of water, but the country will support livestock, and the people carry on mixed farming. The people in the forest zone are crop farmers; horses and cattle cannot live in the forest because of the tsetse fly. Their subsistence crops of yam and coco-yam and oil-palm have been largely supplemented during the present century by the orchard crop of cocoa. This change from annual to permanent crops has meant that the old system of shifting cultivation has been more and more restricted, and a tremendous demand for land has grown up. Before the cocoa industry was introduced, villages and their farm-lands were like islands in the surrounding sea of forest; now the problem is to preserve enough forest to prevent erosion and to maintain the rainfall, shade, and humidity which the cocoa needs.

The Gold Coast was peopled by a succession of tribal migrations from the north, which may have begun about the thirteenth century, and which came to a close less than two hundred years ago. Until the end of the sixteenth century, the Gold Coast peoples looked northward for their inspiration and for their trade to the great civilized empires of the mediaeval Sudan. But in the sixteenth century, the last of these, the Songhai empire, was conquered by Morocco and fell into chaos and barbarism, while about the same time the European traders arrived on the coast. The trade routes to the north were now precarious; while to the south there opened a new trade, the trade with the white men in gold and slaves.

So it came about that the Gold Coast was divided between a great number of tribes speaking a number of different languages. The biggest language group in the forest belt was that of the Akan; its principal languages were Fante and Twi, the latter spoken in a number of dialects. Fante and Twi speakers can understand each other with some difficulty. The other two most important languages

of the south, Ga and Ewe, are different from each other and from the Akan languages. There are many other languages spoken by smaller groups. In the north there are two principal languages, Moshi and Dagomba, closely related to each other but utterly unrelated to any language of the south.

The Akan and some other peoples are matrilineal, the Ga and others are patrilineal. Generally speaking, the social unit is the extended family; families are grouped together in larger units according to circumstances. A small village, for example, is governed by a council of heads of families; if the village forms part of a larger unit, the head of the village council will be a member of the higher council, and will represent his people's views there. The general temper of the Gold Coast political institutions is strongly democratic.

The central theme of Gold Coast history in the seventeenth and eighteenth centuries was the gradual development of one of the Akan tribes, the Ashanti, to a position of military predominance. The successful wars of conquest in which the Ashanti engaged supplied hordes of prisoners to be sold to the European slave-traders on the coast. At the beginning of the nineteenth century the inland power of the Ashanti attacked the Fante tribes of the coast, who had prospered by acting as middlemen for the trade in slaves and gold. The Fante were defeated; and the war brought the Ashanti into direct contact with the Europeans. In the course of the nineteenth century the British bought out the Danes and the Dutch, and became the sole European power on the Gold Coast. In 1874 the country south of the Ashanti frontier was proclaimed a British colony, but the Ashanti question was not finally settled until Ashanti itself was finally conquered in 1901. The country was wretchedly poor after the abolition of the slave trade in 1807, but prosperity began to return about the beginning of this century with the expansion of the cocoa industry and with the opening of the deep goldmines in Ashanti territory.

Educational System and Economic Development

Although there is one school in the Gold Coast which has a continuous history since 1788, the effective history of Gold Coast education begins with the arrival of the Basel and Bremen missionaries in 1828 and 1847, and with the beginning of Methodist missionary work in 1835. Gradually the country became covered with a network of primary schools; in 1881 there were 139 schools with some 5,000 pupils, and at the end of World War I, forty years later, there were 35,000 children in school. The first Director of Education for the Gold Coast was appointed in 1890.

The period from this appointment to the beginning of World War I was a period of slow economic development. African farmers were cutting deeper into the forest to establish the cocoa farms, and

European mining companies were extending the gold-mines and paying increasing royalties to the African landowners. Government revenue increased from £586,000 in 1900 to £1,302,000 in 1914. Educational expansion could not be rapid; the number of children in school rose from 12,000 in 1900 to 19,000 in 1913. But the first task in education at this time was not to expand but to co-ordinate and to lay the foundation for future expansion. In 1909 the Government opened a technical school and a training college for primary school teachers; the Basel mission already had its own training colleges, but the new Government training college trained teachers for all other mission schools and also for Government schools. In that same year, 1909, the old system was abolished by which the grant payable to an aided school was assessed on its examination results. The new system based grants on general efficiency; to qualify for a grant, a school was to employ a staff of satisfactory quality, to comply with regulations concerning efficient management, and to give instruction according to a prescribed curriculum. Grants could be paid not only to primary schools, but to secondary schools and training colleges. The Government had begun opening its own schools in 1900, but, as in England, the Government regarded itself as responsible not for replacing but for aiding and supplementing the efforts of the churches. The year 1909 is thus an important date in the development of a national system of education in the Gold Coast. The new system of grants-in-aid set before the schools an ideal of efficiency; the Government assumed responsibility for assisting the schools to attain that ideal; and the establishment of the training college gave promise of the essential requisite for progress, a supply of trained teachers.

Secondary education also began to expand during this period. The Methodist Mission had established a high school in 1876. In 1906 the S.P.G. opened a secondary school for boys at Cape Coast, now called Adisadel College; in 1909 the Wesleyan Collegiate School and the Fanti Public School of Cape Coast were united into Mfantsipim Secondary School. In 1921, at the end of the war, there were five post-primary institutions, all very small; they drew their students from all over the country, so that a national system of education was beginning to develop.

The period of consolidation was followed by a period of rapid advance. The new cocoa farms had come into production, and the war had raised the price of Gold Coast cocoa, so that the country had an accumulated surplus of revenue. Gold Coast troops had fought in the Cameroons and in East Africa, and there was a new national pride in their achievements. The new Governor, Sir Gordon Guggisberg, decided to capitalize the surplus revenue; he built a deep-water harbour, made extensions to the railway system,

and provided the country with an excellent system of main roads: developments of the country's system of communications which had a great influence in unifying national feeling.

In education, too, Guggisberg took an important step. The Phelps-Stokes Fund of America sent a commission to survey West African education in 1920, and a local committee in the Gold Coast made recommendations for developing education in the Gold Coast. Guggisberg was impressed with the need, and with his opportunity. He was advised that more secondary education was needed, both for boys and for girls; and in 1924 he founded Achimota College.

Achimota was originally intended to be a pair of twin secondary schools. But under the guidance of the first principal, A. G. Fraser, and of his African right-hand man Aggrey, this conventional plan was quickly altered. Fraser declared that the primary school foundations were too weak to support a good secondary school, and he insisted on opening an infant school so that the future pupils of the Achimota secondary school should be raised under his own eye. The twin secondary schools were merged into one co-educational school. Fraser and Guggisberg were agreed that Africa needed a Christian education, and Fraser had made it a condition of his accepting the principalship that he should be free to choose his own staff, and to choose people who would make the new college a Christian fellowship. Further, he had obtained the concession that Achimota should rank as an independent Government department, and should not be subject to the Director of Education.

This uncompromising break with tradition did not pass without protest. The existing secondary schools, always short of staff and money, complained, not without reason, when they saw Government resources in staff and equipment being poured into Achimota, while they were left to continue their struggle almost unaided. While Achimota accumulated a staff of over sixty graduates, it was understandable that many educationists should feel that the most effective way of furthering secondary education would be to establish half a dozen schools in different parts of the country, or to use the new teaching force to strengthen the staff of the existing secondary schools. But Fraser was inexorable. He was convinced that sixty teachers would do more effective work if concentrated into one large institution than if scattered abroad. He wanted versatility, a wide range of out-of-class activities, and a strong community life; and although he lent staff to other institutions for a year or two to gain experience, he recalled them as soon as Achimota was ready to make use of them. Nevertheless, he was not able to maintain in its completeness his scheme of beginning with infants. The pressure of outside opinion forced him to take over in 1927 the Government teacher training college, and to open Achimota's secondary department as early as 1929, five years before the first infant pupils of Achimota were ready to enter the secondary stage. In 1929, too,

Achimota opened classes for pupils who had completed their secondary education with the Cambridge School Certificate. It prepared them for the intermediate arts and science examinations of London University, and in mechanical and civil engineering it provided the full London degree course. Next year, 1930, the Gold Coast Government granted Achimota a constitution which set it free from direct Government control, and placed it under a council partly nominated and partly elected.

With its staff of sixty graduates and one hundred non-graduates (the latter practically all African, and the graduate body being steadily more and more Africanized), its resident student body of 750, its strong Christian tradition, its cult of African languages, of African art and music and history, and its full and strenuous community life, Achimota College was a powerful influence towards unity in a small country of only 4½ million people. Achimota, moreover, was only the biggest and the most generously staffed and equipped of a number of schools and colleges which shared the same ideals and methods, and exercised the same influence.

Achimota was not the only symptom of a new movement in education. Two years earlier, the Government established four junior trade schools, in which technical training was to be balanced with general education. In the same year, 1924, a Methodist training college for teachers was opened at Kumasi, and in 1930 a Roman Catholic college was opened at Amisano near Cape Coast. At the same time primary education began to spread fast, under the stimulus of the new grant-in-aid regulations, which promised a grant to every school satisfying the Government's standards of efficiency.

Tribal Organization and Modern Social Needs

While education and Government revenue expanded, the Government's main political problem was to knit together the different tribes and language groups into one Gold Coast people, and to develop out of the native tribal organization a system of local and central government suited to the needs of a modern society. The semi-feudal tribal system under which the Gold Coast lived was in many ways well suited to the needs of a static agricultural community, particularly in the closeness with which the tribal authorities responded to public opinion. But as it had developed largely to meet the military needs of tribal warfare and was based on the intense local loyalties of a sedentary rural people, it was ill-suited to a peaceful and progressive nation.

In 1925 the Government established a system by which the chiefs in an administrative province assembled in a provincial advisory council. The idea was much criticized, particularly by tribesmen who feared that their democratically elected chiefs might be seduced into expressing opinions on matters which had not been (and very likely could not be) laid before their tribal councils in the traditional

way. But the provincial councils did prove an effective means of political education, and at a later stage the Government was able to go further and set up a joint provincial council in which chiefs from all parts of the Colony were able to discuss national matters.

An assembly of chiefs and their traditional elders, however broad the area represented, had one obvious weakness. It took no account of opinion among the educated section of the community: or rather, of the section of the community which had received a formal education of the European type. These " youngmen ", as they were called in Gold Coast English, were usually excluded from membership of the tribal councils, though they could attend and could address the meeting. Actual membership was restricted to the holders of traditional office, who were nearly always illiterate or elderly; there was a good deal of distrust felt by conservative tribesmen for chiefs or elders who had been to school and acquired the semi-magic arts of reading and writing. Here there was the beginning of a cleavage which, as education progressed, might in time destroy Gold Coast society.

A series of measures, ending with the Native Administration Ordinance of 1927, had been passed in order to regulate the tribal system; but when education and economic development began to make such advance, it became both possible, and urgent, to consider not merely regulating and preserving the tribal organization, but changing it so as to enable it to meet modern needs. In 1939 the tribal authorities were required to establish treasuries and modern systems of accounting so as to finance their services, and they were empowered to levy rates for approved purposes. For some years past, certain local authorities had been providing schools; in the Gold Coast, as elsewhere in Africa, school education had established itself by the nineteen-thirties as the subject of the keenest popular demand. Roads, dispensaries, forestry reserves, none of the other ' approved purposes ' had the popular appeal of schools.

Progress was being made also in the reorganization of the central legislature. The legislative council of 1897 was composed of four official members, the Chief Justice, and three nominated unofficial members. It was enlarged in 1903, in 1916, and again in 1925. In 1925 the council consisted of fifteen official members, three African members elected to represent municipalities, six African members representing the provincial councils, and five nominated European members. In 1943 two Africans were nominated as members of the Governor's executive council.

During the Second World War, the stream began to run yet faster. The demand for primary education increased more and more, and hundreds of non-assisted schools were opened without the knowledge either of the voluntary agencies or of the Government education department. The Government was already alarmed at the financial problem set up by the increase in the number of

schools qualifying for a grant, and in 1937 it appointed a fresh committee to inquire into the whole future of Gold Coast education. The committee reported in 1941, and the country immediately began applying its recommendations. In 1942 the Central Advisory Committee on Education was established, and in the same year the first district education committee was set up; since then, district education committees have multiplied to cover the whole area of the Gold Coast apart from the extreme north. The district education committees are still advisory, but they will soon develop into education committees of local authorities, very much on the English pattern.

In 1944 the first decisive step was taken towards transforming the tribal authorities into modern local government bodies. The Native Authority Ordinance of that year divided the country into native authority areas, which might coincide with one large tribal area or be made up by joining several smaller ones; the members of the native authority were appointed by the Governor. Native authorities were given statutory duties in local government, and by the Native Courts Ordinance of the same year, their judicial functions were reorganized and geared into the judicial machinery of the Supreme Court. The work of these ordinances was completed by the Local Government Ordinance of 1951, which established a complete system of district and local councils, some members being nominated by the native authorities in the area, and the rest being popularly elected. The financial machinery, and the statutory powers and duties of the new councils, closely resemble the English model.

Post-war Developments

While local government institutions were thus rapidly developing, great changes were taking place also in the central Government and in education. One significant episode in Gold Coast history is the cocoa hold-up of 1937. The peasant farmers, resenting the fluctuations in the price of cocoa, joined in a collective refusal to sell their cocoa to the agents of the European firms. Few people expected a large number of previously unorganized small farmers to hold out. But they did hold out; and the result was that the Government appointed a Royal Commission to inquire into the marketing system. The Commission recommended a thorough reorganization, and a public corporation was established to grade and market the cocoa, paying the growers a price in good years which would enable it to accumulate reserves so as to cushion the effect of a disastrous fall in prices when the bad years came. This victory over the European merchants, which the cocoa farmers obtained through their solidarity, helped the Gold Coast people to feel their strength. Then came the war, with the prosperity which resulted from the war-time high prices, and the new ideas which came from British and American service men in the Gold Coast, and from Gold Coast service men

who returned from campaigning in Abyssinia and Burma. Immediately after the war, the growing unity and maturity of the Gold Coast was recognized by the grant of a new constitution. Under this constitution of 1946, the Legislative Council was recast, and the elected members were placed in a majority over the official and nominated members; but there was no ministerial system, and policy continued to be controlled by the permanent officials.

This constitution, the first in British tropical Africa to provide for an elected majority in the legislature, was a great advance; but it gave power with very little responsibility, and it is not surprising that it was short-lived. Economic inflation caused a good deal of unrest, and a commission of inquiry, the Watson Commission of 1948, reported that further political advance was desirable. The Government accepted the advice, and entrusted the work of drawing up detailed constitutional proposals to an all-African committee. The committee's proposals were accepted almost in their entirety, and in 1951 the first Gold Coast prime minister assumed office at the head of a cabinet of eleven members, eight of whom were chosen by himself from the members of his own party in an elected legislature.

The most important post-war development in education was the establishment of the University College of the Gold Coast in 1948. The founders of Achimota had hoped that it would one day grow to university status, and for some years the college had been doing a certain amount of university work. In 1945 the Elliot Commission on higher education in West Africa considered Achimota's claim. The majority of the Commission thought that Achimota's natural development should not be checked, but the minority thought that it would be impossible to staff more than one West African university college at that time, and if West Africa were to have only one college, that one must be in Nigeria. The Government in London favoured the minority view, but the Gold Coast people refused to accept its consequences for Achimota, and the Government in London gave way and accepted the risk—subsequently justified—of founding university colleges both in Nigeria and in the Gold Coast. The existing Achimota College, which had already shed its primary department, was divided into three separate institutions, a secondary school, a teacher training college, and a university college. As a parallel development to the university college, a higher technical college was established at Kumasi.

To balance the development of the university college and of the higher technical college, the African Minister of Education and Social Welfare announced in 1951 an accelerated development plan for education. The chief aims of the plan were to expand the facilities for teacher training so as to provide a free six-year basic primary course for all children, to make great increases in the provision of secondary grammar and technical schools, and to develop

a system of local education authorities to take over much of the responsibility for educational administration.

Constitutional legislation does not so much change society as recognize changes which have already taken place. Gold Coast society has been transformed by many influences. The simple agricultural life of the tribe has been changed by the development of mining and of cash crops, notably the slowly-maturing crop of cocoa. Many forces have helped to break down tribal separation and develop national unity: the development of communications and commerce, the experience of two world wars, the economic troubles of the 'thirties and the 'forties, and the big residential secondary schools. This new national unity has been given outward expression by the recasting of the country's political machinery, the establishment of a central elected legislature with a cabinet of African ministers, and of a local government system on English lines. Tribal loyalties persist, but they will become less and less powerful in competition with the unifying forces of commerce, a national system of education, the Press, and national politics.

W. E. F. WARD.

CHAPTER THREE

THE PROTECTORATES OF SOUTHERN AFRICA

THE anthropologist of to-day is prone to admit that his interest in education is not pedagogical but is chiefly concerned with the part education can play in adapting native culture to changing conditions. By implication, the educationist is on sound ground only if curricular content, methods, and administration recognize indigenous culture and are closely related to it. For this reason, the anthropologist tends to disparage African education, for apart from a little rudimentary instruction in arts and crafts, in music, in local history and legend, and in the vernacular, the influence of such culture is conspicuously lacking within the schools. Under Mumford many years ago, at Malangali in Tanganyika, an enterprising attempt was made to organize an African school on tribal lines, and the claim was made, somewhat optimistically, that different behaviour patterns were adopted according to the tribal elements represented. The school, however, steadily began to resemble others and from this attempt no enduring influence upon the territorial system emerged.

But, save for a small minority, educationists are not unduly perturbed, and their attitude receives considerable support from the Africans themselves. The best representatives of this point of view would claim that society is never static; that there are admittedly survivals and conflicts; that because of the impact of our highly industrialized Western civilization there will be more conflicts and cultural changes in Africa than survivals, and that the latter rarely have marked current relevance or stability as social determinants. Certainly the tribal economies of primitive societies, and their social, political, and religious systems, are rapidly disappearing. However sincere the wish to conserve the best in African culture might be, therefore, it has no greater validity as a basis for an educational system than it would have for health or agriculture.

For example, Dr. Kuper writes of the Swazi, in her penetrating and sympathetic study *An African Aristocracy*, that they:

> have no scientific understanding of soil deficiencies. Crops are not rotated . . . no effort is made to manure the fields. Swazi do not terrace, nor . do they irrigate; they transfer responsibility for the essential water supply to the rulers as rain-makers.
>
> No efficient method of control of pests is known . though every gardener attempts to safeguard himself by magical ritual the underground granaries are neither waterproof nor airtight.

Similarly, when among the Swazi, sociological obligations derive from blood transfusions, or when the position of a man throughout life is determined by his age class (which defines his rights over his juniors and his obligations towards his seniors), and when he is debarred by heredity from acquiring any position of privilege, the educationist should depart from, rather than attempt to idealize or sublimate, such cultural features.

Further examples might be taken from Basutoland. Of late it has received unenviable publicity owing to the dreadful outbreak of *diretlo,* or ritual murders. When human flesh was needed for the chief's *lenaka* or horn of protective medicine, it was necessary that the victim should belong to another clan. To-day, the clans are becoming heterogeneous: this may certainly lead to an ethnic change, but no one would consider the changed pattern desirable. Dr. Hugh Ashton, in his recent scholarly work on *The Basuto*—when examining the theory that the function of some institutions and aspects of culture is to satisfy certain basic human needs—contends that when primitive societies were in a state of equilibrium the systems effectively achieved their object, but that to-day, when the societies are unstable, the assumption is no longer valid.

Nor is there any survival value in bone-throwing or smelling-out, nor in mortuary rites, sorcery, divination, rain-making, luck charms, maternity rites, or most ritual dancing. Nor again in the fantastic knowledge of physiology and bodily functions which permits fractures to be mended by powder mixed with goat's fat, nor in the taking of medicine to render thieves invisible.

In contrast to the anthropological aim, the Rt. Hon. A. Creech Jones in 1948, as Secretary of State for the Colonies, summed up his administrative aim as follows:

> Our major tasks include the bringing of fertility to the land, the conservation and irrigation of the soil, the generation of power, the transformation of agricultural methods, the prevention of famine and the preservation of crops from pests, the elimination of foul diseases which attack man, beast, and plant alike, the mastery of ignorance, the increase of wealth to ensure good standards of living for all, and the provision of the basic services and equipment of the modern State essential for civilized living.

Here is a call for wise planning, for a purposeful, energetic action in social development and, one assumes, in endeavours to promote common citizenship by widening the horizon of human relationships. Whilst education must subserve such a policy and so assist the attainment of higher standards and better conditions, it must not be confined to serve as the handmaid of changing colonial policies. It must deal with the realistic and balanced needs of all who are educable: nor will those needs be solely utilitarian. They include the aesthetic and, emphatically, the spiritual, if anarchy is to be avoided, since whatever tribal unity there was is rapidly being

replaced by individual materialism. In *The African Today*, Westermann wrote:

> There is nobody in Africa who has a serious belief in the future of indigenous religions; they never had reformers and martyrs and will have none.

Sublimated animism has been tried and found wanting, so that our trusteeship of culture must include giving the African ready access to Christianity.

Of the three territories under review, the position of the Christian mission is undeniably the most precarious in the Bechuanaland Protectorate (300,000 square miles). There, for many years, the London Missionary Society had a virtual monopoly, but its schools, forty-three in number, were handed over to local authorities. To-day there are but six or seven mission schools. Expansion is resisted by the native authorities, whose committee-controlled schools display, on the average, by comparison with those in other countries, deplorably low standards in buildings, equipment, and achievement.

The first command paper emphasized the basic importance of religion in African education. The later memorandum [1] on the education of African communities made clear that His Majesty's Government welcomed the contribution of religious communities to the moral advancement of the people. The Church with social vision and a wide community outlook was a powerful ally in the field of social betterment. Despite the strategic place which the missions have held so long in the educational systems of Basutoland and of Swaziland—and of their potential in Bechuanaland—these directives appear to have been overlooked in the realignment of policy. If education is to be the living force needed in cultural change, it should be permeated with spiritual ideals. Hence the situation would be jeopardized if mission schools became subservient to local education authorities: so often an extension of reactionary native authorities.

In planning, educational policy should take into account, among other things, the connexion with the cross-fertilization of cultures and the steady disappearance of many cultural features; with colonial policy as administered and as changing in the High Commission Territories; with political and economic relationships *vis-à-vis* the Union of South Africa; with the political and economic influence of other Colonial Powers; with post-war needs and moral obligations. Here, reference to but a few of these considerations will be made.

In all these matters, however, the *tempo* is being rapidly accelerated, so that the educational contribution becomes an issue of real urgency and an honourable liability, whatever the social strains involved may be.

[1] *Colonial No. 103:* 1935.

Cross-fertilization of Cultures

Changes in the culture pattern have taken place. Nearly twenty years ago there were about eight thousand polygamists in Basutoland; their number has been steadily reduced and the time is not far distant when, there being no survivals, many social patterns will disappear. The *kenela* or *levirate* custom, whereby the husband's younger brother consorted with the childless widow to raise children in her husband's name, is being replaced by the remarriage of widows. To-day, instead of tying a gall-bladder to the bridegroom's right wrist, the wedding ring is being placed upon the third finger of the bride's left hand.

Further, the compulsory *matsema,* or organized co-operative working parties called up by the chief with penalties for non-compliance, are most reluctantly attended, a parallel being the strong aversion shown towards regimental labour in Bechuanaland. Thus when certain regiments were summoned from the Madinare and other districts to give free labour in the building of the Bamangwato College, they deserted in large numbers, crossing the Transvaal border to seek wage-earning employment at Union labour centres.

Illustrations could be extended indefinitely. In general, reciprocal family obligations and attitudes will decreasingly influence social situations, for there will be a growth of rivalry, of individualism, and of claims for property rights; migrant labour weakening patterns of kinship behaviour, and Western culture steadily invading even the poorest home.

In education, I would nevertheless urge that a much larger place be given to African arts and crafts. Admittedly in Bechuanaland and in Basutoland little remains of a really high standard, but with the help of tribal craftsmen assisted by modern technicians, some craftwork could usefully be revived in modified form. In the same two territories, orthography reform is urgently overdue, an impasse having been created in Basutoland some years ago by referring a carefully considered report to the National Council; a body of a hundred strong, largely composed of those least calculated to advise on the subject. In Bechuanaland, an orthography committee functions perfunctorily, without the vital interest of the government or the community. Swaziland is fortunate in that so much expert work has been finalized on Zulu: a cognate language. In all these territories graded instruction in the vernacular sadly calls for development, together with the promotion of higher standards in the vernacular Press and the encouragement of African journalists and authors.

Local history, the recording of place-names and their origins, tribal praises, and realistic but simple civics should be fostered. In connexion with the last, where native authorities are competent and willing to assist, their services should be enlisted, as should those of

administrative officers. It will soon be too late to record folk-lore, but the attempt should be made and the material used in schools. Village industries, offering occupational as well as aesthetic and recreational values, are at present entirely lacking or non-effective. Basutoland, with its wool and mohair, should provide rich opportunities. Over a period of years, however, the value of the work—poor in quantity and quality—has been judged by the financial loss entailed. In consequence, it has been transferred from the Education Department to Native Administration, and thence to Missions, and requires to be organized and supported much more extensively.

Social obligations as well as rights should be taught in and out of school, and village community life should be made more attractive and stable. This ties up with welfare work, and one of the disquieting features of the Territories is that this important service—which should help to banish the drab monotony of wattle and daub, and to bring enlightenment to remote areas—is considered an unimportant luxury which must defer to more urgent needs. It could well include some of the more suitable forms of indigenous recreation.

Educational Planning and Economic Development

The educational efforts of the High Commission Territories are pathetically small when measured against the magnitude of the need: their systems being still largely sub-primary. Here, as elsewhere, the tendency of late appears to be the retarding of social services to promote economic development, as though the two were mutually exclusive, and as though in the distant future uneducated Africans, having produced a flourishing economy, could then turn to the educational needs of their children. Understandably, after two world wars, with the resultant shortage of raw materials and food supplies, overseas money sought investments in those dependencies from which an early return could be expected. On this criterion, the High Commission Territories had little or nothing to sell. The inadequacy of their educational facilities appears to be a direct outcome of this and of their own material poverty. In Basutoland, for example, no industries have been established; no exploitable minerals have been discovered, and it has been calculated that 60 per cent. of the able-bodied tax payers are absent as migrant labour.

The schemes introduced by the Colonial Development Corporation (including the ranching projects north of the Molopo, the cold-storage development plan at Lobatsi, the agricultural activities at Matetsi, as well as the small asbestos mine recently reopened as a Native Administration project) do point, however, to further avenues of training and employment in Bechuanaland. So do the forestry, mining, and agricultural schemes for Swaziland, and the parallel developments in Basutoland, which include water supplies, surveys, road construction, soil conservation, and the like.

It must not be assumed that overseas money automatically begets more money. Also relevant to development are social inheritance and response; educational and living standards; the climate of opinion; the degree of active and efficient participation; moral values and 'the ripening effect of time'. The educational challenge is urgent. In Bechuanaland the obsolete education proclamation of 1938 calls for replacement. Amending legislation, urgently needed, was prepared five years ago. In all three countries there is a complete dearth of library facilities; audio-visual aids and broadcasting are neglected; departmental welfare work is almost entirely confined to the periodic use of a mobile cinema van in each territory, and on the grounds of economy teachers' journals and public-relations activities have ceased to function. Colonial capital funds, never adequate, tend to be voted for a few government institutions. The vast majority of teachers enjoy the benefit of neither a pension nor a provident fund.

Under the conception of the colonial welfare state there is a tendency in post-war planning to regard the government as solely responsible for social, economic, and political development. As against this, action should be co-operative and not competitive, resources and aspirations being pooled in the common interest. Regional educational planning, co-ordinated with inter-departmental schemes, is sadly lacking, and should be related to administrative divisions. This is statutorily provided for in Basutoland, but is still largely non-effective.

Meanwhile, it is axiomatic in these areas, as elsewhere, that primary education should be environmental, secondary education less so and post-secondary education only to the extent of providing specialist African studies in university courses. Furthermore, in technical courses the application to local situations should be kept in mind. But, because of the prior claims of juveniles and the absence of adequate resources, little or no community work or fundamental education of any value has been done, although the White Paper on Mass Education was discussed between the three directors and the Basutoland Education Commission in 1945. The need to reach all who are educable remains, but has received no official recognition.

Political conditions (discussed later) permitting, and granted the necessary resources now conspicuously lacking, it would be wise to have long-range planning for vocational training to meet such comprehensive aims as those of Mr. Creech Jones (quoted earlier). Concurrently, the more active promotion of secondary and post-secondary studies would be essential. Supplementing this would be training for, and employment in, such measures as anti-erosion work, contouring, tree-planting, controlled grazing, animal husbandry, the castrating of scrub stock, improved marketing, more

intensive cultivation and seed selection, and such technical activities as building, carpentry, motor mechanics, and so on.

Additionally, but imperatively, there would be the more willing acceptance of a policy, so widely accepted elsewhere, of admitting specially trained Africans to as many branches of the Central and Native Administration services as possible, in posts of increasing responsibility at all levels. Although a beginning has been made along these lines, there is evidence of some reluctance in according adequate opportunity, commensurate status, and appropriate terms of service in posts of seniority. Possibly this reflects the proximity and imponderable influence of the Union.

Should more departmental training facilities be opened up, as seems essential (and as has happened in East and West Africa), the implementation of policy would be greatly assisted. In the Bechuanaland Protectorate, apart from a small homecrafts centre of post-primary standard, and a modest teacher-training centre with similar entrance qualifications, there are no vocational courses under the aegis of the Education Department. Even at the large and splendidly equipped Public Works Department Depot at Gaberones (where differentiated courses could be given competently), and where, presumably, subsequent employment could be provided for many, the training is negligible.

In Basutoland, vocational training is confined to teacher training, post-primary and post-junior secondary, to a single domestic-science centre, and to the Government Technical School at Lerotholi. In addition there is training—very circumscribed in quality and quantity—by other departments. In Swaziland the position is very similar to that in the two other dependencies.

At the same time the need for African clerks exists in all departments. And for the training and admission of others to posts of responsibility in that *corps d'élite*, the Administration; as well as in the Departments of Education, Agriculture, Forestry, Veterinary, Medicine, Public Works, Stores, Police, Posts and Telegraphs, Railways, Public Relations and Welfare Work, Surveying, Geology, the Treasury, and others. There is a similar need in Native Administrations, missions, and commercial and industrial undertakings. One could particularize, and so extend the scope, but the picture is clear.

Basic to all reform should be the extension of teacher training, for the present output—qualitatively or quantitatively—can never hope to meet rising demands. Further, mere technicians will prove inadequate, be they in charge of teacher training or the products of it. Upon the new generation of teachers must largely depend the success or failure of rehabilitation and betterment schemes: the social, educational, economic, political, and moral standards of the community. For they will influence more than most the climate of opinion, the acceptance or rejection of propaganda, and the assessment of values.

Political Considerations

Briefly the political situation is: that the scheduled conditions under the enabling section of the Act regarding possible transfer of the Territories to the Union of South Africa are no longer binding on either party owing to the altered status of the Dominion; that the ultimate arbiter on the question of transfer is the Parliament of the United Kingdom; that consultation with the African populations is periodically postponed since its outcome would be embarrassing; that there can be no consultation until the terms and conditions have been defined; that overseas and international opinion would almost certainly be unfavourable, but the Union regards it as an affair of honour, grows restive under continued postponement and begins to threaten to apply sanctions. The situation is as unsettling as possible for the people concerned, who have clung loyally to their British allegiance.

Whilst the political future is unpredictable, the shape of educational policy remains uncertain. Should the Territories be incorporated, presumably the 1953 Bantu Education Act would apply. The second-reading debate (and the Eiselen Commission's report which inspired the Bill) suggests that education in the Protectorates would then subserve politics, and its nature be determined by a bureaucratic planning authority, which within certain narrow limits would define the place of the African in the general economy of South Africa. Should incorporation not take place, an alternative assumption is that liberal policies, in conformity with those of other colonial dependencies, would provide ever-widening occupational opportunities and related vocational training.

Meanwhile the Union has placed a ban on the admission of extra-territorial non-European students to schools, colleges, and universities in South Africa. This creates a formidable problem for the High Commission Territories (which have enjoyed the educational hospitality of the Union for over fifty years), for they lack the resources to provide adequate alternative facilities. So they must look elsewhere for post-graduate professional courses. When established, the Central African University may provide suitable facilities for many. Nearer at hand is the Catholic University College at Roma in Basutoland. It was recently visited by an authoritative commission, appointed by the Senate of the University of South Africa, to determine whether approval should be granted for the establishment of a post-graduate course leading to the University Education Diploma. Authority has since been given for its introduction in 1955, and concurrently for the opening of a science faculty.

The Union ban suggests also the desirability of creating inter-territorial institutions: particularly for vocational training. A quarterly journal in English might promote corporate loyalty and solidarity: at present so lacking in Bechuanaland and entirely

lacking between Territories. Transfers and exchange of personnel would facilitate this, as also would informative bulletins in the main vernaculars.

Conclusion

Nevertheless, in the field of economic development—even though neither benevolent coercion nor passive acquiescence is an adequate determinant; though financial resources are meagre; the present educational systems deplorably deficient; the political horizon obscure—the challenge is urgent. Benevolent tendencies are so often paralysed by native authorities, and mission expansion, with its rich potential and spiritual force, is being steadily arrested by processes which are secularizing in result, if not in motive. Yet the basic responsibility must be shared by the administration, the social service departments, the missions, and the Africans to guide the consequential cultural changes of economic development.

In the degree to which this essay reflects some of the salient problems, their related needs and ever-increasing urgency, it may be considered whether the time has not come for the appointment of a representative commission to examine and report on education within the group of High Commission Territories, the Protectorates of Southern Africa.

H. JOWITT.

CHAPTER FOUR

PUBLIC EDUCATION IN THE FAR NORTH OF THE U.S.S.R.

In the Far North of the Soviet Union there are over twenty different nationalities, among them Nenets, Evenk, Nanai, Chukchi, Eskimo, Itelmen.

For long years, peoples of the Far North lived in darkness and ignorance. A large group of the Northern population were nomadic or semi-nomadic peoples. The population had no schools or other cultural establishments, and no written language of their own.

After the establishment of Soviet power in the northern districts, active planned work was begun in the sphere of educating the indigenous population, who manifested a great desire for education.

The population's nomadic and semi-nomadic way of life, the scattered nature and small size of the settlements, slowed down this work considerably. It was necessary to find a type of school that was best suited to the specific character of the life of the local population. The type of school found most suitable in the North was the boarding school. The children were fully maintained in the school at state expense. The boarding school became a nursery of culture, a centre for all-round educational work.

Another type of school created in the specific conditions of the North was the travelling school. Travelling along with the reindeer-breeders, this school educated both the children and the adults among the nomadic population. It taught elementary knowledge in reading, writing, and arithmetic, and prepared the children of the nomads for the boarding school. The travelling school has done a lot to win for itself the trust and favour of the nomadic population, and has made possible the schooling of the greater part of the children. The school brought knowledge not only to the children, but also to the adults. It was common in the classes for people of 18–20 years of age, or even more, to be sitting next to 9–10-year-olds.

Beginning with the 1930–31 academic year, the number of Northern schools increased rapidly, as did the number of pupils. In 1930–31 there were 132 schools in the North, in 1931–2 there were already 192, in 1932–3 296, in 1933–4 358, and in 1934–5 466.

By 1934, already all the children of the Saami people were attending school. In the Nenets national area, 80·8 per cent. of the local population's children were studying, and in the Narym area 97 per cent.

At present there are thousands of schools functioning in the Far

North, including seven-year and ten-year (complete secondary) schools; tens of thousands of children of the local population are being educated. The school network that has been built up is fully adequate to ensure schooling to all children of the population of the Far North. In 1917, distant Kamchatka had only 17 schools. Now there are over 400 schools and three teaching schools training elementary school teachers. Over 30,000 children receive schooling within this network.

In the the remote Chukchi national area, where formerly there was complete illiteracy, there are now 84 schools, including five secondary and ten seven-year schools.

The children of the peoples of the Far North are maintained at the boarding schools at state expense. They not only receive board, bedding, and food free of charge, but also clothes, footwear, text-books and notebooks, and other needs. The educational work carried out in the boarding schools is quite extensive. The state also pays the fares and expenses of children entering any of the specialised secondary or higher institutions of the country.

In order further to improve the academic and educational work conducted among the children of the northern peoples, special preparatory classes have been started at the national schools of the North, at which 7-year-old children are prepared for the first class. Yet, only in 1932 the peoples of the North received their first 'ABC' books in their own languages. The publication of these books was preceded by much work, involving the study of the dialects and the development of the literary languages of the peoples of the North. At the same time the Chukchi, Eskimo, Koryak, Nanai, Evenk, Even, Mansi, Khanty, Nenets peoples received a written language.

Scientific workers and specialists in the languages of the peoples of the Far North are engaged in the study of other local languages of the North. The work of elaborating written languages for the people of the North is continuing. Thus, in the summer of 1953, the undergraduate and postgraduate students of the departments of the peoples of the North existing at higher teaching institutions took part in expeditions for practical work to the autonomous national areas of Siberia. There they carried out important work for verifying the basic peculiarities of the Evenk, Nenets, Mansi, and other languages, which was required for compiling grammars.

Considerable research work was done by the integrated expedition of linguists which visited the Yamal Peninsula and the *taiga* settlements in the Evenk national area. The expedition studied the development of the vocabulary of the Evenk, Nenets, and other peoples, drew up dialect maps, and noted down the ancient words of hunters and reindeer-breeders, legends, tales, and proverbs.

The extensive material which was gathered made it possible to begin work on new dictionaries, grammars, and textbooks on teach-

ing methods for schools of the Northern peoples. At present, Russian-Mansi and Russian-Eskimo dictionaries are being compiled.

A conference on the question of the languages of the peoples of the North was held in Leningrad on December 8th–13th, 1952. The scientific collaborators of the Institute of National Schools of the R.S.F.S.R. Academy of Educational Sciences, the Institute of Linguistics of the U.S.S.R., Academy of Sciences, and teachers of secondary and higher institutions took part in the conference. The scientific and practical problems connected with the development of the literary languages of the peoples of the North were discussed, and also questions relating to improving the study of the national and Russian languages in the schools of the peoples of the North.

Recently a study was made on the question of changing the dialect serving as the basis for the Evenk literary language, and the question of creating literary languages for different dialects of the Khanty language.

It was decided to select, for the further development of the Evenk literary language, that dialect which is understood by the majority of the population of the Evenk national area. The dialect corresponding to this demand is the one spoken by the Evenk in the basin of the Podkamennaya Tunguska River. In view of the fact that it is impossible to serve the requirements of the schools in all territorial groupings of the Khanty population by a literary language based on one dialect, it was decided to create literary languages on the Kazym, Vakh (on the basis of the Bolshenaryak vernacular), and Surgut (on the basis of the Trom-Agan vernacular) dialects.

On the basis of extensive scientific research work, alphabets were worked out in 1952 for the Selkup and Nivkhi languages; they were published in 1953 in the form of 'ABC' books for the preparatory classes of the elementary school.

The question is now being studied of introducing additional signs into the languages of the peoples of the North to indicate mid-back vowel phonemes, tongue-back nasal consonant phonemes, and others.

The schools are supplied not only with textbooks in the national and Russian languages, but also with children's literature in the national languages, and different aids to study (like visual aids, dictionaries, special literature on teaching methods, etc.).

From 1945 to 1953, over a hundred different textbooks and scores of different literary works for children were published in the national languages of the peoples of the North; the schools received this literature free of charge.

Teachers of the schools in the North, and students from the North attending higher institutions of the U.S.S.R., take part in the work of compiling textbooks in the national languages of the peoples of the North. They are also translating into their own languages the literary works recommended as extra-curricular reading.

Wide prospects for specialized secondary and higher education have been opened up to the children of the collective-farm reindeer-breeders and hunters of the North. Children of the peoples of the North are studying in different specialized secondary and higher institutions of the country.

Seven teaching schools of the peoples of the North, and the departments of the peoples of the North at the Leningrad and Khabarovsk teacher training institutes, are training teachers for the elementary, secondary, and teaching schools of the North, and also scientific workers from among the peoples of the North.

At the higher teacher training institutes of Leningrad and Khabarovsk alone, close on six hundred youths and girls of the peoples of the North are studying. Representatives of twenty Northern nationalities are studying at the Leningrad Teachers' Training Institute, among them forty-eight Nenets, thirty-seven Khanty, sixty-one Evenk.

The state ensures to the students from among the Northern peoples, education and maintenance up to the completion of their education completely free of charge, including dormitory accommodation, food, clothing, medical services, textbooks, and return travelling expenses.

At present, hundreds of teachers from among the peoples of the North are working as teachers in the northern schools. Among them are Chukchi, Eskimo, Koryak, Nivkhsi, Ulchi, Saha, Lamut, Evenk, Nenets, Yukagir, and others. Many of them are graduates of the local teaching schools, while others have finished at higher institutions in other parts of the country. A good part of the teachers working in the schools of the Chukchi national area come from the local population.

The peoples of the North, who had no written language in the past, have now developed their own intelligentsia, their own teachers, doctors, linguists, livestock experts, engineers, statesmen, and executives of public organizations.

The names of the poets and writers of the peoples of the North are known throughout the U.S.S.R. Among them are A. Platonov and A. Salatkin, both Evenk; N. Vilka, a Nenets; K. Kekketyn, a Koryak; Rythey, a Chukchi; and others.

The national art of the peoples of the North is deservedly appreciated. The works of two talented painters—Uzar an Udege, and Pankov, a Nenets—won first prizes at the Paris international exhibition. The works of the fine sculptor and carver in bone, Vukvol, who is a Chukchi, were acquired by Moscow museums and are exhibited there.

The development of public education in the Far North of the U.S.S.R. is encouraging the rapid economic and cultural progress of the peoples inhabiting that region.

D. P. Korzh.

CHAPTER FIVE

PUBLIC EDUCATION IN KOMI AUTONOMOUS SOVIET SOCIALIST REPUBLIC

THE Komi Autonomous Soviet Socialist Republic is situated in the North-East of the European part of the U.S.S.R. Its northern boundary is beyond the Arctic circle. A considerable area of the Republic (nearly 70 per cent.) is covered with forests rich in fur-bearing animals and game.

Since ancient times this territory has been populated by the Komi people. For thousands of years the people have been extending the settlement of this barren region, wresting each acre from the *taiga* with the utmost difficulty.

Before the October Revolution the Komi people had no national school, literature, or written language. According to official data, in 1917 only a quarter of the population could read and sign their names; literacy among women was rare. There were villages where not a single inhabitant could read or write.

After the Great October Socialist Revolution, apart from the economic changes that took place, much was done to educate the local population. This work has already borne fruit. Whereas, in the past, three-quarters of the population was illiterate, now Komi has become a republic of universal literacy. To-day, the Komi people have their own written language; they read books, newspapers, and magazines in their own language, and are developing their national culture and art.

Already in 1929, 84 per cent. of the children of school age were going to school. In the 'thirties, the network of schools continued to grow rapidly and they were given more and more material support. During 1928–32, allocations for public education were increased by 3·5 times. Three teaching schools were opened, and in 1932 the Teachers' Training Institute of Komi was set up.

The continuous increase in the number of seven-year (incomplete secondary) and ten-year (complete secondary) schools, and the increasing material support rendered them, made it possible to introduce directly after the war universal seven-year education for children of 7 to 15, and to extend complete secondary education each year. At present there are 278 elementary, seven-year, and ten-year schools functioning on the territory of the Komi Autonomous Soviet Socialist Republic, at which over 67,000 children are being educated. There are over 3,900 teachers.

Within the past five years alone 52 new seven-year and 30 new

ten-year schools were opened. The number of seven-year schools, as compared with that of the pre-war year of 1940, increased by 70 per cent., and the number of ten-year schools was more than doubled. The number of pupils in the eighth–tenth classes increased threefold

In the current school year, universal ten-year education for children of 7–17 years of age is being introduced in Syktyvkar, the capital of Komi.

There are 180 seven-year and ten-year boarding schools for children of members of reindeer-breeding collective farms who live far from the schools. The cost of maintaining these schools will amount to ten million *roubles*[1] this year.

Allocations for public education (not including secondary and higher special educational institutions) amount to 50 per cent. of the budget expenditure of the Komi Republic.

As far as the training of personnel for the various branches of the national economy is concerned, there are thirteen technical schools and an extensive network of factory and workshop schools and trade schools, at which the youths and girls get a high degree of technical training, receiving full support from the State.

The republic has a network of night schools for workers and peasant youth at which they can study without discontinuing their normal work.

In addition to the schools, the republic has a network of institutions for extra-curricular activities and for organizing children's leisure, such as pioneer palaces and houses where they are given elementary training in the technical field or can develop their talents in music or the dramatic art, youth sports schools, young naturalists' clubs, children's stadiums and parks.

The elimination of illiteracy and the raising of the general cultural level of the population have brought about a development of newspaper and publishing activities. In 1952, for instance, the State Publishing House issued 149 books with total print of 500,000 copies. In the capital of the republic several daily newspapers and a monthly literary journal are published. Literary and dramatic works have widely developed. The play *Wedding with a Dowry*, by the local dramatist N. Dyakonov, has received recognition far beyond the boundaries of the republic.

Apart from a large number of houses of culture and village clubs, 487 libraries have been established in the republic.

The public education workers of the Komi republic, just as those throughout the U.S.S.R., are faced with the task of completing the transition from universal seven-year to universal ten-year education in the large towns, and of creating the necessary prerequisites for the complete achievement within the next five-year period (1956–60) of universal ten-year (complete secondary) education in all the cities, towns, and villages of the republic.

A. Rudakov.

[1] Approximately: 11·2 *roubles* = £1; 4 *roubles* = U.S. $1.

CHAPTER SIX

EDUCATION IN THE YAKUT AUTONOMOUS SOVIET SOCIALIST REPUBLIC

It was not until after the establishment of Soviet power in 1917 that any attempt was made to bring education to the population of Yakutia. At that time the Yakut people did not have even a written language, and literacy had barely reached 0·7 per cent.

After the 1917 Revolution the doors of the schools were opened wide to the children of the working people, which led to the rapid development of education.

By 1927 the Yakut Autonomous Soviet Socialist Republic already had 211 elementary schools, 27 seven-year schools, and two secondary (ten-year) schools, with a total of 13,700 pupils. Side by side with the building of more schools, instruction in the native language was introduced, a process which was completed in the elementary schools in the first ten years of the existence of Soviet power.

The introduction of instruction in the native language and its study in the schools had a favourable effect also on the study of the Russian language. Russian was introduced as a separate subject, and was studied in the same way as the elements of science. In this way Yakut school children were given an opportunity of becoming widely acquainted with the culture of the great Russian people.

The next stage in the development of education in Yakutia came with the introduction of universal compulsory elementary education. First introduced in 1930, it resulted in more schools being built and the enrolment of more pupils. From 1927 to 1937 the number of schools was almost doubled and the number of pupils increased threefold.

Besides making elementary education a reality, the republic has greatly extended seven-year and secondary education. By 1940 there were already 157 seven-year schools and 38 secondary schools functioning, and even during the war years new schools were built and the number of pupils kept growing.

The introduction in 1949 of universal seven-year education throughout the republic was followed by the building of more seven-year and ten-year schools. Compared with the 491 schools function-

ing in 1940, there are now 582, of which 258 are seven-year and secondary schools.

One of the results of the wide cultural development in the Yakut A.S.S.R. is the rise in the culture of the Even, Evenk, Chukchi, and other peoples inhabiting the Far North of the republic. Just as the Yakut people, these peoples started practically from scratch in developing their culture.

Before the 1917 Revolution there were only five schools on the whole territory of the fourteen Far North districts of Yakutia, with a total of 166 pupils in 1911. Since the establishment of Soviet power, however, an extensive network of elementary, seven-year, and secondary schools has been set up. To-day, Yakutia's fourteen Northern districts have 111 schools, of which 72 are elementary schools, 28 seven-year, and 11 secondary. There are 7,363 pupils.

Side by side with the growing number of schools, increasing numbers of teachers are being trained. There were only 254 teachers altogether in 1917, whereas to-day there are 4,486. Three teacher training schools, a teaching institute, and a teacher training institute are turning out qualified teachers for the republic. Many students study to become teachers through correspondence courses. Every year, special courses of advanced training for teachers are also held.

The Soviet government stints nothing for developing education in the Republic, which can be seen from the constantly increasing allocations to education in the budget. From 1945 to 1953 expenditure on education in the Republic went up by 130 million *roubles*.[1] In 1953 alone the government allocated 51,700,000 *roubles* for the maintenance of 20,000 pupils at government boarding schools. In the seven years from 1946 to 1952 the government allocated 57,209,000 *roubles* for the construction of standard buildings for schools, boarding schools, and kindergartens.

As the Yakut A.S.S.R. is a multi-national republic, there are Yakut, Russian, Even, Evenk, and Chukchi schools at which instruction is given in the respective languages. It is therefore of exceptional importance to supply the schools with textbooks, manuals on method, and general and political literature in the pupil's own tongue.

This very difficult problem has been successfully solved. Each national school gets all the textbooks it requires in the language spoken by the pupils. The Republic's printing industry puts out every year large editions of special children's literature; in the past five years, eighty children's story-books were published in the Yakut language, with a total print of 419,000, and eighty-four textbooks in the original and in translation for use in Yakut schools. In the

[1] Approximately: 11·2 *roubles* = £1; 4 *roubles* = U.S. $1.

same period the schools of the Republic acquired 4,411,000 *roubles'* worth of visual aids.

The Soviet state has provided excellent facilities for rest and recreation for the children of the Northern peoples. Tens of thousands of them spend their summer holidays in children's camps, or go on walking tours and excursions, or to sports camps. A large number of children's camps and playgrounds is maintained by the trade unions. In spite of the immense distances involved, every summer children from the Republic spend their holidays at Artek, the famous children's camp in the Crimea, or go on visits to Moscow, Leningrad, Michurinsk, Sverdlovsk, and other cities.

The Republic also has many general educational schools (seven-year and secondary) for young workers and collective farmers; they are to be found in practically all district centres, industrial townships, and towns. At present some 2,000 young people attend these schools after working hours.

Pre-school education has also been extensively developed. Before the Revolution, Yakutia did not have a single kindergarten; in 1920 it had only three, which cared for 272 children. By 1942 there were 57 kindergartens, caring for 1,960 children, and to-day there are 74 with 2,645 children. Since 1931 a pre-school department has been functioning at the Yakutsk teaching school, which has trained hundreds of specialists with a secondary education.

A clear indication of the cultural advance of the working people of Yakutia is the abolition of illiteracy among the adult population. A herculean task has been performed in Soviet times in teaching the population to read and write. Between 1924 and 1953 more than 160,000 illiterates of 16 to 50 years of age have been taught to read and write.

Such are the achievements of the Yakut A.S.S.R. in the sphere of education.

Z. I. Savvin.

CHAPTER SEVEN

PAPUA AND THE TRUST TERRITORY OF NEW GUINEA

THE changes which are taking place in the lives of the Natives of Papua and the Trust Territory of New Guinea, and the difficulties which must be overcome if they are to make a satisfactory adaptation to these changes, can be appreciated only if seen against the background of their indigenous cultures, of the character of the country, and of the ways in which the civilization of Western Europe has made its impact upon them.

Geographical Conditions

The two territories comprise the main island of New Guinea east of longitude 141°, the two islands New Britain and New Ireland, and a number of island groups, some of them volcanic, some of them coral atolls. On the mainland and larger islands there are extensive swamps, steep hills covered with tropical rainforest or tall grass and intersected by deep gulleys, and rolling savannahs. The central mountain range is reputed to contain some of the most difficult country ever traversed by man. Within it, at an altitude of 4,000 to 8,000 feet, are wide undulating grasslands. There are only two rivers which are navigable for any appreciable distance by any craft other than canoe or small launch —the Fly in Papua and the Sepik in the Trust Territory. Everywhere, except in the savannahs and grasslands, transport is very difficult. There are only 3,108 miles of roads capable of carrying wheeled traffic, and some of these are impassable in the wet season. Regular air services link the more important European centres, and runways have been constructed in a number of places, but these latter can seldom be used in all weathers and most of them can take only small single-engined planes. Except along the coast, where small craft are used, travelling by Europeans as by Natives is usually on foot, and transport is by human porterage. Fringing coral reefs and a notable lack of good harbours on the mainland are a serious inconvenience to coastal shipping. The rainfall varies greatly: in some areas there is little seasonal difference; in others the range may be as much as 35 or 40 inches in the wettest month to less than 5 inches in driest. Torrential rains make inland travel almost impossible in parts of the interior in the wet season; they also reduce the fertility of the soil by heavy leaching and, on the

steep hillsides, by soil erosion. The very difficult terrain, soil erosion, and leaching are serious obstacles to the economic and political development of the Natives; it is also gravely handicapped by the widespread prevalence of hookworm, framboesia, and above all malaria.

Socio-economic Life

The population of Papua is estimated at 371,436 persons; that of the Trust Territory of 1,090,332. (There are no reliable census figures, for many people in the interior have only recently been brought into contact with the Administration, and others are as yet unknown.) No complete survey has yet been made of the languages spoken in the two territories, but there are certainly over three hundred mutually incomprehensible tongues. Some of these are spoken by as few as four hundred or five hundred persons; others are used with dialectal variations by forty thousand or more. Thus the Natives can be classified into linguistic groups, but there is no political or social unity within any such group. The largest political unit is a local group of from fifty to three hundred persons who live in the same village, or in adjacent hamlets, or in scattered homesteads within a recognized area. The members of this unit are usually linked by bonds of kinship, recognize mutual obligations, habitually co-operate on certain occasions, and in former days often united for war. Relations between different local groups of this kind are normally unfriendly, even when they speak the same language and are associated through trade and marriage. Under European administration, blood-feuds and head-hunting have been suppressed, but it does not seem that inter-village relations have become more amicable. Within each local group there is no specific political organization; hereditary chieftainship exists in only very few places. Each person is bound to every other by a complicated network of reciprocal rights and duties determined primarily by kinship. Authority is vested in the old men, but there are recognized channels through which an individual can achieve distinction: the accumulation of wealth, the supposed possession of potent sorcery, fame as a war-leader, or that combination of qualities which make up a forceful personality. Economic interdependence, belief in supernatural agencies, and the weight of public opinion are the principal sanctions for checking anti-social behaviour and ensuring conformity.

In all New Guinea societies sex-dichotomy is emphasized, the roles of men and women being essentially complementary. Nevertheless, the status of women varies from considerable freedom to great subordination. Except in a few coastal areas where fishing is all-important, the Natives are subsistence agriculturists. They practise a system of shifting cultivation under which new garden ground is cleared every year, crops are raised on it for usually two

successive seasons, and it is then left fallow for from seven to twelve years. The staple foods are yams, taro, bananas, sweet-potatoes, and sago, according to the nature of the country. A large bulk of such food has to be eaten for adequate nourishment, and, except for yam and sago, these crops cannot be stored for more than three or four days. Thus the methods of cultivation and the types of crops grown require a considerable area of land for the support of each individual family, and it is not practicable for large numbers of people to live in a single settlement. Moreover, food cannot be accumulated. Wealth can be amassed in the form of pigs and of such native valuables as strings of shell-money and dogs' teeth, but it cannot safeguard a man against hunger in times of dearth. Individual ownership of chattels and of pigs is general; certain types of equipment which can be used only by a number of people together, such as seine nets, are usually owned by a group of kinsmen; land is almost everywhere regarded as the inalienable property of a kinship group. The right to cultivate certain tracts may be held permanently by a man and transmitted to his heirs (women seldom have this right), but often cultivation rights to a particular plot lapse as soon as the crop is lifted. The nature of land-rights and how they are transmitted vary greatly from one people to another, and even within a single people they may vary according to the nature of the land.

Very few local groups are economically self-sufficient, and there are extensive trade-routes along which goods travel. The trade is carried on through a system of gift-exchange between individual 'trading-partners', and although the so-called shell-money is used in some places and for certain goods as a standard of value and medium of exchange, the social importance of trade exchanges in the minds of the people often overshadows their utilitarian importance, and some of the most highly-prized types of goods have no utilitarian value.

The Impact of European Culture

The social, economic, religious, and political elements of a people's culture are closely intertwined. Any change in any one of them necessarily affects all the others. The coming of the Europeans, bringing new ideas and new goods, influenced every aspect of native life. The three principal agents of culture contact were the Administration through its officers, the Christian Church through its missionaries, and commerce through planters, storekeepers, and prospectors. The Administration and the Church set themselves deliberately to change the ways and ideas of the Natives; the changes wrought by the men of commerce were for the most part accidental or incidental. Administration officers and missionaries alike worked to suppress certain customs, such as head-hunting, cannibalism, and the blood-feud; to introduce the Natives

to new techniques whereby they could improve their standard of living and increase their usefulness to the Europeans; and to establish a relationship between Natives and Europeans which would ensure the supremacy of the latter and yet safeguard the former against ruthless exploitation. The missionaries went further than this, for they were chiefly concerned to introduce new ideas and new standards of values to the people, and thereby they struck at the foundations of the indigenous cultures. The activities of the Administration also had undesigned effects upon native life which were related to and served to intensify those brought about by the activities of the planters and storekeepers. The introduction of a money economy, of a system of wage labour both casual and indentured, and of coveted goods which could be obtained only with money, distorted or destroyed the indigenous network of economic rights and obligations which held members of each local group together.

The impact of European culture has not had the same effects everywhere: they have varied according to the nature of the indigenous culture, according to the nature of the impact, and according to its intensity. No analysis is possible here, but certain broad generalizations can be made.

Even before 1941 the indigenous culture of the Natives in the vicinity of Rabaul and Port Moresby had been transformed; they are now deeply involved in the life of the Europeans and are indeed living in a bi-cultural environment. For a generation, schools, stores, churches, and the cinema have been familiar institutions, a considerable number of the men are wage-earners in skilled or semi-skilled work, and a few have small businesses of their own. Most of their food is bought with money. In villages at a little distance from these large centres, and in the neighbourhood of smaller ones, the transformation has not gone so far, but many types of imported European goods are regarded as necessities and the people are correspondingly dependent upon work which will bring them money. In both the transformed and partly transformed societies the old economic pattern, and therefore the old social pattern, have become inadequate, but as yet no new pattern has developed to replace the old and to give new stability to the people's lives. There appears to be a psychological conflict in many of the men between old loyalties and new. This conflict is due primarily to the new opportunities which economic changes have offered to the young men, for a man cannot make the most of these opportunities unless he rejects patterns of thought and of behaviour, particularly in relation to his kinship obligations, which were instilled into him from early childhood and are hallowed by tradition. The effects of culture contact upon the women of these villages are perhaps less marked, since few women are as directly involved as the men in European economic activities. But where

there has been a change from subsistence agriculture (in which husbands and wives were partners, even if unequal partners) to dependence primarily on goods bought with the husband's wages, the daily life of the women has necessarily altered and not necessarily to their advantage. There is reason to believe that many of the women feel socially and economically insecure. The life of the adolescent girls has also been influenced; they are no longer kept occupied with gardening and are no longer subject to many of the restraints which the indigenous culture imposed upon them.

Most of the Natives are still living in settlements where contact with European culture has been less intimate and less intense. Often it has come indirectly through men who have left their homes to work for a European employer, to serve a gaol sentence, or to attend a mission boarding school. It would appear at first sight that in such settlements the indigenous pattern of life has changed little; in fact the wider social horizon, new interests and opportunities gained by the men, and the shift of wealth and experience from the old to the young has weakened the social structure. The Pacific war intensified the influences of social change already at work, particularly in those areas which were in the fighting zone or were occupied by large bodies of troops. Unimagined wealth of machines and food poured into the country; new and conflicting experiences of people from the outside world were thrust upon the Natives; many of those who worked for the military or enlisted in the army gained a new confidence in themselves and new ambitions. The younger men have in many places become increasingly critical of the ways of their elders and of the limitations of village life. Almost everywhere the chances and changes of war have produced a sense of mingled expectancy and insecurity. Prior to 1941 there were signs that the assumption by the Europeans of control over large areas of native life, such as the settlement of disputes and punishment of offenders, were weakening the Natives' sense of social responsibility, as well as depriving them of a traditional means of achieving distinction through leadership and the exercise of authority. To-day the paternalism of the Administration which, however well-intentioned, seems to relegate the Natives to a position of permanent subordination and tutelage, is widely resented, generally in an ill-defined way but explicitly, by an increasing number of those who have been most deeply influenced by contact with Europeans. Outbreaks of numerous messianic cults ("Cargo cults"), and the ill-devised socio-economic movements of Paliau in Manus (T.N.G.) and Tomu Kabu in the Purari (Papua) are, wittingly or unwittingly, expressions of this resentment. At the same time the necessary rationing of evacuated or war-damaged villages, the seemingly limitless wealth expended by the Europeans during the war, and the way in which war-damage compensation was paid have led the more sophisticated Natives to

look increasingly to the Administration for financial aid and welfare services.

During the past seven years the Administration has initiated the establishment of co-operatives and of village councils as steps towards native economic and political development. Progress in both directions is seriously handicapped by three major obstacles: the persistence of inter-village hostility and suspicion; the lack of any common language; and the unfriendly attitude of the majority of Europeans in the country to what is being attempted. Effective local government cannot develop as long as the local unit consists of only some 25 to 150 adult persons; federation into larger units is essential. But it is taking more than a couple of generations to wipe out the memory of old feuds, massacres, and cannibal feasts, and to-day, even among sophisticated Natives, sickness, death, or any disaster is readily attributed to the sorcery of a neighbouring village. The lack of a common language makes the interchange of ideas, and therefore the building up of larger local groups, difficult. In both territories there are a certain number of 'regional vernaculars' in one of which those who have attended mission schools are usually fluent and literate, but their unifying effect is partly countered by the fact that in the minds of the Natives every regional vernacular is associated with some one missionary society and its use is therefore associated with sectarian divisions. In the Trust Territory, Melanesian pidgin has become a widely used lingua franca, particularly between men, but among the more sophisticated Natives it has the taint of being a 'serf language'. In Papua there is no one lingua franca of equally wide currency, though in most villages there are at least some men who can speak the pidgin vernacular Police Motu. In neither territory, then, is there any one indigenous tongue which can be used for education, for the production of newspapers and of books for instruction or recreation, and for broadcasting. To-day the people themselves are urgent to learn English, and as a second language it is taught in all primary schools (beyond this level it is the medium of instruction). At the present rate of progress, however, there is little likelihood that, except among those who are living in a bi-cultural environment, English will for many years become a medium for thinking and intercommunication among the Natives.

The Uncertain Future

Meanwhile the pace of cultural change is accelerating, and though the Natives are showing a remarkable facility for handling the tools and machines introduced by European civilization, they are not showing a like facility in adjusting themselves socially, or in comprehending the European life which is transforming their own. Experiments in community development are being carried out in several centres; the need to educate girls and women is now

recognized; advances have been made in technical education; and slowly the Administration and the missions are building up a body of trained Native teachers who will extend and improve village schooling; co-operative societies are springing up throughout both territories. So far, however, there is little to tell whether these efforts on the part of the Administration and voluntary agencies are really succeeding in their purpose—that of enabling the Natives to adapt themselves successfully, as individuals and as communities, to their new environment, and of preparing them for the uncertain future which lies before them and their children.

CAMILLA H. WEDGWOOD.

AGRICULTURE AND RURAL LIFE

CHAPTER EIGHT

THE ROLE OF EDUCATION IN THE SOCIAL AND ECONOMIC DEVELOPMENT OF UNDERDEVELOPED AREAS

EDUCATION, broadly defined, is indispensable in the development of technologically underdeveloped countries. Such countries are almost without exception rural and agricultural. Of the twenty-five countries in the world having an annual *per capita* income of less than $100 at the midpoint of this century, all had from two-thirds to nine-tenths of their populations directly dependent on agriculture. Of the fifteen nations whose income ranged from $100 to $200 *per capita*, eleven had more than half their labour force in agriculture. In aggregate, these forty nations have well over half the world's population.[1] At the top of the economic scale are twelve countries enjoying *per capita* incomes of over $500. In these countries the percentage of farm population or of the labour force in agriculture ranges from 11 to 27 per cent. Their total population is barely one-ninth of the world's total.

Obviously, in lands where it requires from one to nine farm families to feed themselves and one nonfarm family, there are proportionately fewer persons available for other productive occupations, and still fewer for the service professions. One of the marks of a technologically advanced culture, indeed one measure of its advance, is the increasing proportion of the labour force in the professions. In the United States this proportion has doubled in the last two generations. Such growth is not only a mark of progress, it is also a condition of progress, since with increasing numbers and proportions available to improve the technology of a given culture, new devices and inventions tend to increase in geometric proportions. This in turn, among other things, helps to increase real wealth, accelerates capital formation, makes more persons available for service and professional occupations, and enables the culture to delay the entrance of youth into the labour force, thus

[1] Food and Agriculture Organization, *Yearbook of Food and Agricultural Statistics*, 1951.

lengthening the period of education. This process is evidence that the more advanced a culture is the more interdependent it becomes. Such a trend is observable in all technologically advanced countries. In the United States, for instance, the average adult, 50 years of age or more, has completed seven or eight grades of school. The proportion of youth 14 to 17 years of age in school has increased over tenfold in two generations, and currently exceeds 80 per cent.

The Need for Education

The problem of upgrading countries where agriculture absorbs the great bulk of the productive energies of the people is to find some way of starting the processes sketched so briefly above. This requires an educational effort of breadth and power. The usual lack of an adequate educational structure, common in too many underdeveloped areas, becomes an immediate major obstacle.

One of the underlying causes of the crises and unrest in the world to-day is that the aspirations and desires of the peoples of underdeveloped countries have expanded far more rapidly than have the educational and economic foundations on which to build the civilization they desire. It is futile in these lands to attempt, for instance, large-scale industrialization unless provision is made to educate the technicians who can direct and operate the new factories, once capital has been secured to build them. The Russians, perhaps, realize this better than most, judging by the tremendous increase in the number of their technical institutes. It is a waste of resources to introduce labour-saving technological devices in an economy suffering from over-population, even in agriculture. A tractor may do the work of ten men; but in countries where the *per capita* income is under $100, wages are so low that ten men are cheaper than the tractor, which must be imported and fed gasoline, whereas the ten men feed themselves.

The urgency of the problem is thus apparent. It is so urgent that priority must be given to the education of adults. This is not to minimize the role and importance of schools. These are essential. They will eventually build the firm educational foundations on which the structure of an advancing technology can be reared. But there is no time to wait until this transpires. Indeed, if adults cannot themselves experience the practical benefits of education they may have little patience with spending meagre resources on schools. If, moreover, the real income of the population is not raised more rapidly than the population grows, there will inevitably be less money for education.

Without, therefore, minimizing the importance of education for children and youth, which must develop and advance to ensure permanent, long-term gains, this discussion will stress the shorter-range but currently more urgent problem of education for the rural adults of underdeveloped countries. The discussion will

begin with brief descriptions of three different but reasonably successful efforts, among a number that might be chosen, to increase the well-being of rural peoples by education. There will follow an analysis of these and other experiments to show some of the principles that make for successful rural adult education. Finally, and in summary, something will be said of the role of education and what can be expected of it.

Cultural Missions of Mexico

An educational invention of importance has been the cultural missions of Mexico. The staff of each mission is made up of six to eight specialists, such as an agriculturalist, a home economist, a public health nurse, an arts and crafts person, and an educator or two. The mission settles in some important centre for a period of some months. It works with the people there and in the villages of the surrounding area. The work is conducted through existing agencies and groups and through the local school, where one exists. If there is no school, one objective of the mission is to help establish one. In Mexico the school is 'the house of the people'. Its responsibility is to the whole community.

In one village where a school was established by such a mission and where the people themselves constructed the adobe school-community-centre building, a frontal attack was planned on adult illiteracy in harmony with the national programme. But when classes were about to start, the village elders explained that what the village needed far more than the three R's was water. Government help was enlisted. Plans were drawn. The villagers contributed their labour. The water supply was increased. Again the teacher prepared to devote himself fully to formal education. But the village elders explained that now that they had water, they wanted to grow more food, so that the hunger and sometimes near-starvation they had known would be banished. Again the teacher sought government help. What crops would improve the health of the people and grow in that soil? Where could seed be had? Again the people laboured, again school as such was interfered with, but more food than the village had ever known was raised. Their health improved. The people then learned that the government would not accept the surplus products in payment for the seed loans that had been made. They must be sold. Marketing problems were faced and solved. Once more the leaders came to the teacher. "Now," they said, "let us begin to learn." "No," said the teacher in a flash of insight, "now let us begin to learn something else, for in these last years we have all learned much that we did not know before." [2]

[2] Edmund deS. Brunner and E. Hsin Pao Yang, *Rural America and the Extension Service* (New York, Bureau of Publications, Teachers College, Columbia University, 1949).

The Rural Reconstruction Movement in China

Another significant approach was made in China under the Rural Reconstruction Movement. A dedicated and trained staff went to live among the farm people in a number of counties in one province of northern China. Their programme concerned illiteracy, health, economic improvement, and better government. Large use was made of volunteer leaders. The literacy campaign was organized on the basis of the thousand characters of the earlier mass-education movement. Proficient graduates of the courses and middle (high) school children were sent out to teach others. Simple literature was prepared dealing with the people's day-to-day problems in farming and health. Thus they had an incentive to learn to read. In health, high school children were taught to vaccinate and give inoculations, to show how to combat filth and get rid of flies. Junior doctors were trained to treat the more usual and simple diseases and care for relatively minor accidents. For anything beyond their training they hastened to the fully-trained doctor under whom they worked.

On the economic side, better seeds and tillage processes were introduced, wells dug, co-operative credit unions and marketing organizations formed. This effort was ended by the Japanese invasion, but the work was carried on wherever possible. Up to then the improvement in health, educational status, and family income was phenomenal.[3]

Throughout this effort, not only were the participating volunteers given necessary instruction but the people were also educated in terms of both what to do and why it was advantageous to do it.

Co-operative Agricultural and Home Economics Extension Service

In the United States a significant effort grew out of the effort to assist farmers in the low-income area of the south. Sponsored originally by private organizations and a large foundation grant, this programme has now become a nation-wide tax-supported agency, with federal, state, and local governments sharing in the cost. For this reason it is called the Co-operative Agricultural and Home Economics Extension Service. The administration is located at the state colleges of agriculture. Each county has one or more agricultural advisers, usually called agents. Three-quarters of the counties also have home advisers or home demonstration agents. The county staff has the assistance of subject-matter specialists who keep in close touch with the research in their fields being done at their colleges, produce teaching materials and bulletins based on this research, and are general-resource people. Large

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[3] John H. Kolb and Edmund deS. Brunner, *A Study of Rural Society* (Houghton Mifflin Company, 4th edition, 1952).

use is made of volunteer leaders who receive training in the demonstrations and projects they are to conduct in their local groups.

The programme within any county is determined by local needs. The country agents work in close co-operation with the local people through community and country committees. They also pay many farm and home visits, and demonstrations to small groups are a prominent feature of the work. In the aggregate it is therefore a highly variegated series of activities. In the main, what is done falls under nine headings. Within these the adequacy of the programme varies widely. The initial and still major efforts lie along the lines of vocational competence in agriculture and home making, in terms of both production and management. Much attention is given to marketing, which includes everything from co-operatives to attractive packaging of products. There is increasing emphasis on education about economic problems and public policies. While many issues in this area are controversial, it has been found that if all major points of view are presented on any issue there is appreciation rather than criticism. Assistance in planning efficient, economical, and attractive farm homes and buildings has been increasingly demanded. The health area has come in for increasing attention. Another area is concerned with social relationships and cultural values. This deals with family and community relations, recreation and leisure-time activities, and interpretation and appreciation of the cultural values of rural life. Finally, a good deal of attention is paid to rural community organization, leadership development, and programme planning, following scientific principles developed out of considerable research by rural sociologists.

The enterprise is probably the largest rural adult education agency in the world. Its 12,500 professional employees, aided by a million unpaid volunteer leaders, reach annually 80 per cent. of the 5·3 million farm homes in the United States, and several million rural nonfarm homes. Tens of millions of improved practices result because of the quick flow of research information down to the family units. Extension is an educational agency which dares to put its teaching to the acid test of workability on the field, in the home, and in community relations and organization. It has contributed tremendously to the increased agricultural efficiency in the United States which helped so largely in meeting the food needs of the allied nations during and immediately after World War II. As a method of assisting underdeveloped nations through education to improve their social and economic status it has been adopted and enthusiastically promoted by the Food and Agriculture Organization of the United Nations.

An important adjunct of this Extension Service is its youth division, the 4H Clubs. This name signifies activities falling under the headings of land, health, heart, and head. Practical activities are

undertaken in the home and on the farm. Attention is paid to community service. Club meetings combine recreation and education. Over two and a half million young people are enrolled. The success of their projects often serve as a demonstration and a stimulus to adults. A counterpart of this organization is the Future Farmers of America, the club activity of those students enrolled in agricultural courses in rural secondary schools. Here, too, the practical field projects are useful not only to the participants but also as evidence to others of good practices.

The Principles Governing Educational Programmes

These three, and other similar experiments of the last twenty-five years, have a good deal to teach, both as to the principles that should govern a broad educational programme in underdeveloped countries and as to the role education can play.

One of the most important principles is that the educational programme be kept flexible. One reason for this is the fact that even among settlements of the same tribe, conditions such as soil, rainfall, and ease of transportation may vary so greatly that the attack on the problem of upgrading the communities concerned must be comparably adjusted.[4] Another reason lies in the fact that the very success of a programme so changes conditions that activities must be altered to keep abreast of new and changing needs.

Akin to this is the necessity of beginning work with any given people or community *where they are.* Much time and money have been wasted and many heartaches caused because well-intentioned persons have tried to teach, even to improve, the technical knowledge and skills of a society utterly unable to adopt them, both because of limitations of technical understanding and frequently, and even more important, because the new ways transgress cultural traits and values. One has only to recall the violent opposition to the introduction of the iron plough in the United States 150 years ago to realize the significance of this principle. The Mexican teacher mentioned above succeeded because he observed this principle and attacked problems considered most important by the local people. Technology exported to new countries must be adapted to the conditions there existing. It cannot be adopted. This is equally true of a tractor and of educational efforts like the Mexican cultural missions or the extension service as developed in the United States.

A third principle is that an educational programme designed to improve the level of living must reach all the people. It cannot be confined to a dominant group, whether racial, social, or economic.

[4] One of the clearest illustrations of this principle may be found in the forthcoming report of a working committee of the Australian National University on Problems of Development in New Guinea, a preliminary draft of which the author examined.

If the gap between the few *élite* and the masses is widened, in the long run the lot of that society is likely to be worse than before. Nor can the programme be confined to one sex, the male. The great influence of women in their families, especially on their children, means that if they are not included the programme either will fail or will have to be repeated with each new generation. Preferably, also, there should be a women's programme, so that they can see the benefits of technological innovation applied in their own sphere.

As a single illustration, take the case of hybrid corn introduced after thorough education, among a poverty-stricken group of Spanish-American farmers in New Mexico. Yields increased greatly at once. The surplus above local needs was sold at good prices. However, by the third year all but three of the sixty farmers concerned had reverted to planting the indigenous low-yield variety of 'Indian Corn'. Their wives, they said, did not like the texture of the new corn. It gave their tortillas a different colour.[5]

A fourth principle is that in contributing to the development of underdeveloped areas the educator must look at the community as a whole and fit his programme into its on-going social processes. He must do this not only because pests from the farm whose operator refused to use insecticides can reinfect all the farms of the community, but also because in simple cultures life is lived that way. The Pacific islander, the American Indian, the Egyptian fellahin do not think of life in terms of programmes and institutions. They think of life as a whole, with its narrow, totally time-consuming round of duties, and simple, infrequent pleasures. The activities of life are interrelated. One eats because one has first planted. Nor is this untrue in more advanced societies. Half a century or so ago the Rockefeller General Education Board set out to improve education in the southern region of the United States. It was found that the rural south could not support a modern education programme. The economic base had to be strengthened. Hence the board poured hundreds of thousands of dollars into the embryonic extension service already described. But the low vitality of many farmers limited unduly the progress made. Hence the board embarked on a campaign of hookworm eradication and, more difficult, on an educational programme designed to teach the people how to avoid reinfection. Only then were the problems of education as such attacked.[6]

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[5] Edward Spicer, ed. *Human Problems in Technological Change* (New York Russell Sage Foundation, 1952, Case 2). Cf. also Edmund deS. Brunner and Hsin Pao Yang, *Rural America and the Extension Service*, *op. cit.*, pp. 177–80.

[6] Based on a talk given by Dr. Robert Calkins, former President of the General Education Board, before the Columbia University Rural Life Seminar.

The principle that the educator must work in harmony with the culture of the people he is serving, and know and regard its values, is a *sine qua non*. It has, however, been so amply discussed elsewhere in this volume as to require no elaboration here.

It is worth emphasizing in connexion with this point, however, that the educator must be ready to learn from his pupils. Their practices and devices have, after all, grown out of their experiences over decades in their particular environment. The well-publicised British groundnut scheme in central Africa was theoretically sound. Its tremendous difficulties and losses arose in large part from failure to listen to the reasons native leaders gave why the plan would fail, some of which, based on knowledge of local conditions, proved to be only too accurate.

Finally the educator will, if he is wise, enlist local leaders in his programme, carry them along, and delay embarking on any activity not approved by them. There are many reasons for this.

In the first place, the workers of the United Nations and its subsidiary organizations, like FAO and UNESCO, or the Colombo Plan, the British-American Carribean Commission, or the American Point Four programme, cannot hope to reach all the people of the underdeveloped lands. They can teach only a few. It is these few who must reach the many.

In the second place, this is a more effective way to work. It is no surprise to the native of an underdeveloped country that one from another culture and perhaps with a different colour of skin does things differently. The different way may appear to him to be curious, of dubious value, even stupid or dangerous. But when one of his own group masters the new approach, tries it with success and profits from it, he is mightily impressed.

For years devoted resident white medical officers throughout the Fijian Islands made some, but relatively little, progress in raising the health level of the people. When they were joined by superior natives trained as junior doctors in the medical school at Suva, directed by the late Sylvester Lambert, the death-rates began a sensational decline. These native junior doctors, for instance, did not argue with their elders that mosquitoes caused malaria and elephantiasis, an amusing idea of the white folks. They knew their people were convinced that working in wet places caused these difficulties. But they were able to rally their people to fill up some of the swampy holes and eventually to teach the obvious connexion.

In the third place, many innovations being introduced and taught with such missionary zeal the world over challenge practices and beliefs based on centuries of habit or encrusted in ancient and hallowed beliefs. When change follows teaching, opposition will arise, especially if vested interests are threatened. It is the part of wisdom to prevent this opposition from centring on the teacher from without. The struggle should be contained largely within the

society that is facing the changes education has brought about. If the actual innovators are in truth native leaders wisely selected because of that quality, there is much more chance that the better ways will become the accepted ways.

What has all this to do with the role of education in the social and economic improvement of underdeveloped peoples? It would be easy to describe that role earnestly, mayhap even eloquently, in a dozen or more points. But the potential role of education in the face of this world-wide problem can never be actualized unless the principles enumerated above, and several other related ones space prevents mentioning, are accepted and become the warp and woof of the educator's every activity. When that happens and only then can he fulfil the role in which destiny has cast him in this crucial hour.

The mistakes and tragedies of the various technical assistance programmes of the last decade, and there have been far too many, can usually be traced to the neglect of these fundamental principles, to the bumptious idea that mere technical 'know-how' can be effective unaccompanied by social and educational 'know-how'. Contrarywise, when these principles are understood and accepted the role of education in upgrading underdeveloped countries becomes of paramount importance. This role has been recognized not only in FAO's emphasis upon extension but also in pronouncements of technical-assistance leaders of the United Nations and its Social and Economic Council.

The Role of Education

The role of education in the less prosperous, largely rural countries of the world is to put forth its best efforts to reach adults and at the same time to build a supporting system of education for children and youth. All the major concerns of life must be encompassed in such efforts, because any such concern neglected may undermine, even prevent, advance in other sectors.

The role of education is to teach and inspire, not to operate; for instance, to teach about co-operatives, how to organize them, how to operate them successfully, and how to train local people to be officers, but not to staff the co-operative itself and do the work for the members.

Education must do continuous research with respect to the people being assisted, with respect to physical conditions and current practices and the reason for them on the one hand, and with respect to the culture, its social organization, mores, and values on the other, in order that teaching may be ever more appealing to the people and hence more effective.

The role of education is to seek and teach ways by which what the Euro-American culture has discovered to be practical can be tailored and adapted to the needs and demands of peoples whose

aspirations have begun to outstrip their premachine-age technologies, but who can change only in ways harmonious with the values they still hold.

Education must recognize, and proclaim in season and out of season in the technically proficient West, that in these underdeveloped lands education is not the mere transmission of a new technique. It is the implanting of a radically changed outlook in the minds and hearts of men. For, granted all the faults that may mar Western culture, it is nonetheless the value placed on the human personality and the freedom of the human spirit that have to a large extent motivated the drive to make men free for the richer, deeper things of life through ever-improved technologies.

EDMUND DES. BRUNNER.

CHAPTER NINE

PROGRAMMES OF RURAL DEVELOPMENT IN IRAN

THE Near East Foundation and the Iran Foundation are private, non-religious agencies, devoted to the improvement of rural living conditions. The Near East Foundation operates in a number of Near Eastern countries; the Iran Foundation is limited to Iran.

The Near East Foundation

The object of the Near East Foundation is to assist rural development by instituting practical programmes of community and agricultural rehabilitation at the village level where the largest part of the Near East's population lives. This assistance takes the form of demonstration programmes designed to provide the basis for a country-wide service to be carried on ultimately by the local government with its own funds and personnel.

To accomplish this the Foundation orients its work in three directions:

(*a*) The government of the country must be shown the possibilities and methods of rural improvement with a view to the inauguration of its own national services.

(*b*) Selected communities must be taught improved agricultural and village practices, thus demonstrating, both to the government and to the farmer, the application of needed techniques in the actual setting of rural life.

(*c*) Community leaders must be trained, both to become the nucleus of the government's own staff when the Foundation's work is made into a government-directed programme and to demonstrate to the government and the community how leadership training should be undertaken.

The implement used to accomplish these objectives is a pilot project, carried on in a group of carefully selected villages. The programme is basically non-academic and usually takes place through informal demonstration instruction. Its methodology is that of the American-pattern rural-extension agent, who takes improved practices directly to the farmer in the field and the housewife in her home. The necessary community organizations (co-operatives, study groups, training centres) are created only as need for them arises.

This project is for demonstration purposes only, and is not

designed to be continued permanently. After the Foundation's work is completed, the government either inaugurates a national programme based on the experience of the demonstration, or takes over the project as a pattern for other centres throughout the country. Ideally each project should become integrated into national practices within approximately five years.

The Near East Foundation's programme began in Iran in 1946, when an agreement of co-operative action was signed with the Iranian government. This agreement is always the first step in the Foundation's work, for it provides the link by which the new services become integrated into the government's programme. The agreement specifies the division of responsibility between the government and the Foundation, the general type of programme to be undertaken, and the contribution to be made by both parties.

The area chosen for the demonstration was the Veramin Plain, an agricultural district lying about twenty-five miles south-east of Teheran. Work was first begun in five villages, but this number was shortly increased to thirty-five.

The first activities were agricultural, designed to gain the confidence of the peasant in an area where co-operation could be easily secured, and to meet the pressing need of the villages for more food. By direct demonstration, improvements in seeding practices were introduced, a few new crops were grown, and the system of irrigation was improved.

As soon as the agricultural programme was well under way, and had been accepted by the people, other and less obvious aspects of rural improvement were added. Simple sanitation techniques were applied to the control of flies and mosquitoes; waste disposal, village water supply, and household latrines were introduced. The sanitation programme was followed by the development of rural schools for village children and classes for illiterate adults. When these programmes had thoroughly gained the confidence of the men, it was possible to commence home welfare work among village women. Through this step-by-step method, a fully-rounded programme of rural development was in operation in less than three years.

From the beginning, young Iranians were employed as village workers acting under the close supervision of the American technicians. The first qualification looked for in these local leaders, who constituted the field staff, was knowledge of and sympathy for village life rather than technical education. With the latter, a person is often well-trained in theory but unable or unwilling to undertake the actual work in the villages.

These first leaders were given their education through the apprentice system, working as assistants to the American specialists. As the programme developed, leadership training was based on intensive pre-service experience, using participation in the project in combination with more formal instruction. As the trainees increased in skill,

they were sent to villages in the demonstration area and guided in their community activities through the supervision of itinerant extension agents.

At the centre of this programme lies the concept of the multipurpose community leader. The leader's basic training and interest are in the field of agriculture, but he is given enough skills in other aspects of village work, such as sanitation, recreation, community organization, and economic development, to take the first steps by himself and to utilize intelligently the guidance of the government's and the Foundation's technical experts.

An example of this training technique is the development of village schools in the Veramin Plain. When the Foundation began its programme, there were only three schools in the area. In order to open new schools as rapidly as possible, selected boys with not more than a sixth-grade primary education were placed in villages as teachers, working under the constant direction of the Foundation's educational supervisor. In addition to regular visits from the supervisor, the teachers met weekly for practical training and discussion of their school programmes and methods. As part of this in-service training a summer course was added, to supply a short, intensive period of academic instruction without interrupting the service of the teacher in the village. So successful was this experiment that the Iran government requested the Foundation to open a training centre to supply teachers for the Ministry of Education's own rural school programme. This was done in the Mamazon area, where the Foundation's projects were used as laboratories for practical experience in rural improvement. The centre now enrols approximately two hundred trainees, and has provided more than one hundred and eighty teachers for the Ministry of Education.

Through this method, the rural schools in the Veramin area have been increased to sixty-two, with an enrolment of over five thousand pupils. Each village school is not only a centre for formal education but also the injection-point for new agricultural and sanitary practices, and the school teacher serves as a local community leader.

This programme was jointly financed by the Foundation and the Iranian government. The Iranian government provided an annual grant of approximately $60,000 (in cash, materials, supplies, and technicians) towards the general programme, and the Shah's Welfare Fund made a special donation of $220,000 for a programme of sanitary demonstration in a selected village. To these substantial sums, the Foundation added about $25,000 annually.

The result of this work was so immediate and favourable and commended itself so strongly to the Iranian government that shortly after the inauguration of the U.S. Government's Technical Cooperation programme (Point Four), the Foundation was requested to act as a contractual agent for some of the TCA activities. This led

to a rapid enlargement of the demonstration area, which now includes over three hundred villages.

Shortly thereafter a special grant was made by the Ford Foundation to assist with the training of land-distribution supervisors. The Royal programme of Crown Land Distribution is expected to put some two thousand villages into the hands of landless peasants who have had no experience in operating their own property. To prepare for this, the teacher training centre was expanded so that its trainees could serve the government as land-distribution supervisors as well as rural teachers.

At the present time the Foundation's programme in Iran includes:

(*a*) Agricultural demonstration, embracing improved land preparation, new crops, improved poultry, the development of family gardens, the use and servicing of farm machinery.

(*b*) Sanitation, with a training centre for village sanitarians (enrolling trainees) and a programme of sanitary control that reaches two hundred and fifty-seven villages.

(*c*) Education, with a rural teacher training centre and the supervision of sixty-two village schools and classes for adult literacy.

(*d*) Home welfare, teaching literacy, food preparation, and home crafts which at the moment reach twenty-one villages.

It is emphasized that all aspects of this programme are for demonstration and training purposes only. The successful conclusion of the Foundation's work will be reached only when the lessons it teaches will be incorporated by the Iranian government in their own services.

The Iran Foundation

The object of the Iran Foundation is to advance health and education in Iran through demonstration projects and the services of technical advisers. The funds of the Foundation are the gift of an Iranian business man, while the technical direction is contributed by a small group of representative American professional men.

One of the Foundation's first projects was the establishment of a municipal water system for the city of Shiraz, replacing the insanitary open-channel supply of the kind found in most Iranian cities. The new system was financed by the Foundation as a capital gift to the city; its income is assigned to the support of the work of the hospital which the Foundation operates.

The principal instrument of the Foundation's work in health is the Nemazee Hospital and Nurse Training Centre in Shiraz. The hospital cares for the medical needs of the city and provides a training centre for nurses for government services. To direct the programme of the hospital, a Medical Advisory Council has been created in the United States. The chairman of this committee recently was sent to Iran to survey eye diseases prevalent in the country, and to consult with the local Iranian staff on the conduct of

the hospital. Through scholarships and fellowships, Iranians are being trained in the United States as hospital administrators and pediatricians.

To assist in the government's public-health programme, the Foundation contributed the services of its medical director for a two-year period, first to assist in carrying out the programme of the Health Section of the seven-year plan, then to act as Director-General of Public Health under the Iranian Ministry of Public Health.

Another contribution to the public health was a Malaria-Control project in the Shiraz Valley. For two successive years a team of American experts worked in the valley, both to control malaria in the district and to demonstrate modern methods of village sanitation.

Recently the Foundation has established an Educational Advisory Council for the purpose of co-operating with other agencies and foundations in setting up programmes of vocational and technical training. It has also assisted the Imperial Organization for Social Services in Iran through supplementing some of their programmes for the preparation of teachers for the blind, and in the study of programmes for the education of the blind.

The Iran Foundation is a unique example of local philanthropy, foreign technical advice, and governmental services co-operating for social development.

JOHN S. BADEAU.

CHAPTER TEN

SOUTH AFRICA[1]

A VICIOUS circle has been set up in the Reserves in South Africa. The soil has become impoverished, the Native must find employment elsewhere, but he still wishes to maintain his hold on the Reserve land. There is a deep-rooted longing in every Native man to acquire a herd of cattle. This has for centuries been the mark of his social status. Even among modern urbanized Natives there is still the desire to invest their money in cattle which could graze in the Reserves or on a European's farm. It remains a form of currency; chiefs can fine minor offenders so many head of cattle; and *lobola*—the bride-price—is usually quoted as so many beasts. As the number of cattle increases, less soil is available for crops; the result is over-cropping, over-grazing, and eventually large-scale soil erosion. Because of over-stocking and the poor quality of cattle, the production of milk, formerly the Native's most important protective food, has diminished. Malnutrition followed as a result. The total milk shortage in these areas must amount to tens of millions of gallons per year. In addition, as the carrying capacity of the veld is decreasing year by year, there is a spreading of Karoo vegetation and a diminution of water supplies in areas hitherto well provided.

As a result of the growing impoverishment, more and more are leaving the Reserves as migrant labour. In industry this means rising costs and lower efficiency because of the constant need to initiate new workers. This high labour turnover brought about by the migrant system is also very evident on the farms. The large numbers flocking to the cities each year have created a problem which the authorities have so far been unable to solve. The miracle is that there are not more slums around our big cities. The Fagan Report has summarized the social and moral consequences of this situation:

> It must be obvious that ill-effects will follow when there are communities in which there is a serious disproportion between the sexes. Yet migratory labour on a substantial scale necessarily involves the existence of such communities. The great preponderance of males over

[1] This is an extract from a longer article in which three basic organic educational needs for South Africa are discussed, viz: the global (i.e. ideological), continental (i.e. 'Africa') thinking, and planning for the full conservation and development of the whole country's personal, spiritual, and natural resources. This extract deals only with one of these aspects.
THE EDITORS.

females amongst the Native population in industrial centres, and the presence of large numbers of men who cannot enjoy the comforts, the restfulness, and the beneficial influence of family life, are factors that cannot but play their part in paving the way to restlessness and discontent, prostitution, low morals, rape, and general criminal tendencies, and in promoting illicit unions of which the offspring again grow up in conditions that encourage delinquency. In the Reserves there is a preponderance of females, likewise leading to loose morals; also to lack of discipline in the home, and consequent evil effects on the children.

Perhaps these unfavourable aspects of the system have been somewhat over-emphasized. In spite of them the relations between Whites and non-Whites have been relatively more peaceful in South Africa than in most other territories in Africa. Evil and ignorant propaganda, mostly from outside the Union, has succeeded in partly destroying this relationship, but it is not likely to destroy the underlying good-will and the positive belief in the possibility of a nationwide solution.

Betterment Attempts in Rural Life

From 1936 onwards new land was being acquired for the Natives, so-called " Trust Land " where Native families could settle in an orderly fashion. These settlements range from irrigation projects (wheat, maize, and vegetables) to dry land where livestock naturally plays a bigger part. The Trust is empowered to exercise control over the land and restrict the number of stock to the carrying capacity. It makes a thorough study of the natural resources of the area, and of the subdivision into residential, arable, and grazing sections. Although there is a slow demand by the Natives themselves to have their areas declared " Betterment Areas ", it remains one of the greatest educational tasks to make the Native realize the advantages of new methods. Nothing can be achieved by force; agricultural officers will introduce culling of livestock only where the consent of the Native chiefs has been obtained. The purpose of the betterment programme is to show the Bantu ' diehards ' the contrast between cattle on the new and old systems, or between soil and pasture conditions on controlled and uncontrolled land.

At Hammanskraal, for example, the Trust will allow Native stock to be fattened for sale on its carefully controlled grazing camps at a nominal monthly charge of 2*d*. a head. At one sale a Native refused a bid of £4 for an ox. After three months' fattening on the neighbouring Trust farm—at a cost to him of only 6*d*.—the same animal was sold at the next stock sale for £18 10*s*.

In the North Transvaal, forty-seven dams have been built in one reserve across thirteen miles of river-bed. There, where adequate pasture was once scarce, hay is now being cut and baled to form a valuable fodder reserve.

Many irrigation projects have been completed in the past fifteen

years, ranging from small vegetable gardens to the Taungs Scheme, where an area of 12,000 acres is to be irrigated. Wheat and lucerne are the two main crops here, and the harvest already exceeds 10,000 bags. In the Olifants River irrigation scheme the Natives produce as much under European supervision as many European farmers do elsewhere.

The Pilansberg area has been divided into fifteen groups under the administration of a management committee of Natives with the local chief, an educated man, as chairman. Cattle-breeding under this scheme has yielded £83,000, or an average of £19 per beast. The growth of grass has been phenomenal.

At Olivia, after soil reclamation had been introduced, thirty-three out of forty-seven families co-operated in a dairy-farming project to invest in better milk breeds. In this they were assisted by the Senior Agricultural Office. A factory in the vicinity buys the milk from the farm in bulk. During the 1951–2 financial year nearly 26,000 gallons of milk were produced—realizing as much as £30 per month to individual Natives in addition to income derived from other farming activities, such as the sale of pigs, maize, and so on. The area has an average rainfall of 33 inches; with proper cultivation and continued European supervision, good yields of maize and kaffircorn have been recorded. For the first time in their history the Natives have responded to the call to grow winter feed for the cattle, and over 600 tons are now produced annually.

As a rule, there exists close co-operation between the Native Agricultural Department and the Division of Veterinary Service. The departmental field officers assist Natives in classing their cattle at livestock sales and in building up new stock.

There seems to be no doubt, therefore, that the Reserves could produce more than enough for the Natives' consumption and their increased standard of living. Soil reclamation is therefore the big problem—not only for the Native areas but for the whole of South Africa. At least a million *morgen* of the lands comprising the watersheds and basins of the principal river systems in the Union are in Native areas. Hence the need not only for better crop production, animal husbandry, and afforestation, but also for *donga* reclamation, sheet conservation, and drift-sand cultivation.

Education

The Union has taken the lead in Africa in supplying education to its non-European citizens. Indeed, South Africa would like to do even more if she had the revenue. Primary education has made great strides. In 1930 there were fewer than 200,000 Native children at school. At present there are nearly one million—as many as there are at school in Nyasaland, Tanganyika, Uganda, and Kenya with a population two and a half times that of the Union of South Africa. In this achievement the missionary societies have played no small

part. Compared with the European population, there has been a disproportionate gulf between primary and secondary education. The difficulty has been to decide what to teach the African and how to get him to utilize his education in the service of his own people.

Education for the South African Native cannot be entirely agricultural, but must cover and lead to all the fields where human betterment is sought, e.g. Social Welfare (Jan Hofmeyer School), Medicine (Natal, Cape Town, Witwatersrand Universities), Education (Fort Hare and others). But it does seem that in predominantly agricultural rather than industrial communities—as is the case in most African territories—more emphasis should be placed on agricultural education, the development of high standards of personal integrity and independence, and on the creation of opportunities for the exercise of responsibility.

The numbers of Native boys and girls in the schools are about equal, so that South Africa does not face the problem—as does, for example, India—of how to attract females to schools and colleges. But illiteracy is still rife amongst the older Natives of both sexes. In the urban areas a number of student, industrial, and welfare bodies are trying out various methods of combating illiteracy; but in the rural areas very little can be done. Perhaps the need here is to eradicate certain beliefs as, for example, the faith in magic and ancestor worship as means of ensuring a good crop; or the cattle and *lobola* system, according to which cattle are slaughtered only on ceremonial occasions and not used for meat or milk production. Or the system of polygamy by which an additional portion of land is allotted to a man for every wife he has—regardless of whether or not he is there to assist in its cultivation. Indeed, for most of the Natives education must be interpreted in its widest possible sense. It would include cultivation of certain native crops and plants; increased technical knowledge and a study of soil fertility; reorganization of the family structure so that the man takes a more active part in the tilling of the land (usually the woman's task—the man cares only for his cattle); and the introduction of afforestation schemes, so that eventually manure could be used as fertilizer rather than as fuel.

The need for soil rehabilitation and economic development has been generally accepted by the Europeans. But it is difficult to introduce remedial measures by force. It is hoped that the education of the future will be so inspiring that the Native will want to change these conditions himself. It has been generally accepted by all commissions recently appointed to investigate the needs of the African that a basic knowledge of his own way of life should be the foundation on which the educational and cultural structure is built. The Native child must know his South Africa, his Africa, his Mother Earth, and the Native peoples of his continent among whom he has to live and whom he has to help. Unless this is aimed at,

much of his education will be veneer and lead to illusion, frustration, and resentment.

Most economic development in South Africa has taken place in non-Native areas. Seen against this background, the solution for the gulf between seemingly successful urban technological development at a distance on the one hand, and educational and agricultural attempts on the other, would be to bring a *diversified economy* into the Reserves. This would mean the development of primary, secondary, and tertiary resources in the interests of the Native community as a whole: primary, to include products from the soil, be they animal, vegetable, or mineral; secondary, to include most of the industries to which the Natives flock in the European areas; and tertiary, all the professions, trades, and social services.

This would lead to, and in turn be fostered by, the urbanization which should take place *inside* the Reserves. Initially the Europeans will have to supply managers and technicians; but eventually it will be the Natives themselves who build up their cities and cultivate their soil. What is needed in these neglected areas at the moment, and for some considerable time to come, is not white-collar jobs but opportunities for full social, economic, and personal development. This will answer the question not only of *how* the Native will live to-day but also *where* he will live to-morrow. This does not mean that he is not able or intelligent enough to aim at higher classes of work or that he cannot play a full part in the industrial life of the country. But as Dr. S. Bieshuvel pointed out, the *effective* intelligence of Africans, in terms of ability to make adjustments to the needs of a Western technological society and to profit by higher education, is still appreciably below the mean of European communities. " He acquires skills without a tradition of craftsmanship; technical knowledge without any experience of the industrial society to which it pertains, and which is therefore easily forgotten or misapplied; higher learning without the historical and cultural background which give it its full meaning; professional skills without much awareness of the public duty that this practice imposes." [2] But it will be much easier to develop technical knowledge, and social and intellectual skills, when there exists a communal life in which independence and traditions can germinate and grow. The Reserves provide a training-ground where the South African Native may learn and practise amongst his own people the art of government and the application of modern techniques to all aspects of community life.

Remarkable progress has been made by the Natives in many instances. This has been possible because of the leadership and control of the European. Without the example and stimulus of the White man for many decades still to come, there is every probability

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[2] *Optima*, March 1952.

that the Native will sink back again. The extent to which constructive leadership and responsibility are taken, not only by the Government but by all the European citizens individually and through their various organizations, will determine the measure of eventual co-operation with and delegation of specific duties to the Natives. It would be disastrous for the European to withdraw his assistance prematurely.

However, the Native must be taught to take over responsibility himself in the end. The European population is, in any case, too small to continue to provide, *ad infinitum*, administrators, teachers, demonstrators, etc. For the European the problem is how to guide —without being patronizing—and then how to communicate and consult with the new Native leadership and incorporate it into the government.

P. S. OLIVIER.

CHAPTER ELEVEN

CULTURAL PATTERNS AND TECHNOLOGICAL CHANGE

LITTLE expression can be given to the hopes and aspirations of the peoples of the so-called 'under-developed' areas of the world unless something is done to raise the appallingly low standard of living that obtains for many of them. However, these countries are in a dilemma, for conscious as they are of a new faith in their cultural heritage, and spurred on by the sense of destiny which arises from it, they are forced to realize that the achievement of a better life is for them impossible within the circumstances of a traditional life as they have known it in the past. In many cases they have neither the economic resources nor the social and economic organizations which will permit their material prosperity to be greatly improved. In some of these countries industrialization could prove the answer to many problems; in agrarian countries the mechanization of agriculture might help; in territories which have neither industrial resources nor a stable agriculture something might be done to raise the level of economic production (which is the key to improved living) by the introduction of new techniques. But all these involve what is, in effect, a technological revolution in the countries concerned.

In the circumstances it is natural that they should turn to the West, the home of modern technological development, for guidance and inspiration. Nor does the West fail to appreciate many of the issues at stake. The future peace of the world demands that there shall no longer be the same disparity between those countries which have and those which have not as existed in the pre-war world. A growing humanitarianism has brought home to Western peoples that they have a moral obligation, in a shrinking world, to assist peoples less fortunate than themselves. There is also a political consideration. For the most part, these economically under-developed countries are not as yet committed in the struggle between the West and World Communism. For both sides they stand on the periphery as a glittering prize, though they themselves are determined not to be embroiled. But the prospect of gaining their allegiance and perhaps of winning new markets for peaceful commerce reiterates the necessity for the West to extend to these poorer countries all the technical

assistance it can. This has been done, since 1948, through the three main agencies of the United States' Point Four Programme, the Commonwealth's Colombo Plan, and the United Nations Technical Asssistance Programme.

Yet an ironical situation has often arisen, for, so far from bettering the material condition of under-privileged peoples or adding to their store of human happiness and welfare, technical assistance has, in all too many cases, proved a disruptive force in society, leading to tension and unhappiness, and even at times to open hostility and crisis. The Greeks " have the most ancient civilization of the European continent, yet their technical development at the moment is one of the lowest. The history of their industries goes back more than two thousand five hundred years, yet they now resist industrialization ".[1] The Burmese possessed such a sacrosanct view of human personality that any question of regulating another's activities was for them intolerable. " The legal systems of the West, with their emphasis on externality, rationality, and efficiency, clashed with the Burmese way of looking at human worth and integrity." [2] So, too, for one reason or another, has technical assistance proved productive of tension and fear among many other under-privileged peoples. Nor has the situation differed materially when, instead of technological innovation being initiated and directed by foreign personnel, it has been carried out by local experts, themselves reared in the cultures they seek to change. In the short time during which technical assistance has been operative, it has become obvious that technological change is not the simple, straightforward process it was perhaps once assumed to be. Even the under-privileged peoples themselves, when they seek technical assistance, rarely have any conception of the problems involved.

Why is it, then, that technological change should occasion tension and crisis? Why do people so resist change? The answers to these questions must necessarily be complex, but in the main they can be said to lie in two directions: in the attitude to change of the under-privileged peoples themselves and in the nature of Western industrial society.

The Nature of Technological Change

Change is not a new phenomenon in the history of the world, but is endemic in all cultures at all times. Civilizations which cease to change soon atrophy and die. It is, therefore, not something in the nature of change itself which proves a disruptive force in these countries. It is rather the rate and scale [3] on which it operates in the modern world. When change is small and occasional, no culture

[1] UNESCO, *Cultural Patterns and Technical Change*, 1953, p. 77.

[2] *Ibid.*, p. 50–1.

[3] See G. and M. Wilson, *The Analysis of Social Change*, 1945, Chapter II, for a description of scale in society.

finds great difficulty in absorbing it and in reorganizing itself into new patterns. The twin processes of disintegration and reintegration are normal cultural phenomena. It is only when the rate and extent of change become cumulatively increased, and when the rates of change in different parts of the culture differ, that reintegration becomes increasingly difficult. At a certain point it becomes impossible—there is a general breakdown and deculturation ensues. The load of change has become, as it were, too great to bear or to be absorbed, and the culture is overwhelmed. If this condition persists it can become chronic. Then defence mechanisms come into action, and a people may try in a variety of ways to solve their dilemmas. They may attempt to return to old forms of behaviour which are now less satisfactory; they may find relief from tension in aggressive acts, like the Mau Mau in Kenya, or they may withdraw psychologically and physically from the frustrating situation, as the Indians of the North American plains did when the buffalo disappeared; or they may seek to reduce tension by preventing the recurrence of the tension-provoking situation. If they adopt this latter measure the frustration is merely diverted, and the unsolved tensions usually find expression in various and unrelated ways, such as chronic fatigue, compulsive ritual, new socially approved activities, assigning blame to others, and so on.[4] This was the type of reaction seen so frequently in Britain in the 1930's in the coal-mining industry.[5]

Yet, though change is normal, it is disliked—particularly by under-privileged societies, where the web of custom is firmly woven and where men tend to pattern their lives upon accepted customs and beliefs from the past. They fear to leap into the dark unknown. They fear change, and particularly rapid technological change, because it is an unknown quantity, because they do not understand it, because they resent being forced to change, and most of all they fear it when it appears to threaten their basic securities.[6]

Preliminary to any discussion of the effects of technological change on patterns of culture two points must be made. Firstly, since custom and belief are so closely interrelated in the cultures of under-privileged peoples, since there is such an essential 'wholeness' about them, we cannot say that change will necessarily be restricted to the particular aspects of the culture to which it has relevance, and to change which was the purpose of technological innovation. Change, so far from being capable of restriction in such circumstances, is more likely to prove pervasive and to invade other areas of the culture than those it was intended to. It cannot

[4] *Cultural Patterns and Technical Change*, 1953, pp. 290–1.

[5] Cf. J. H. Halliday, *Psycho-social Medicine—A Study of the Sick Society* (New York, 1948), for a description of the sick mining community.

[6] E. H. Spicer (ed.), *Human Problems in Technological Change* (New York, 1952), p. 17.

therefore be precisely circumscribed. Secondly, it is not possible to determine the exact details in which change will have effect. It is usually possible to determine the broad pattern of change, but there can be no unequivocal certainty about its details. We are, in fact, dealing to some extent with an unknown quantity, for just as we recognize the uniqueness of human personality, so, too, we must recognize the uniqueness of human cultures. The conduct of their peoples can never be precisely analysed beforehand, nor can it be reduced to an infallible set of principles. Peoples are always, in some measure, unpredictable. It is possible, however, to foresee in general terms the main areas likely to be affected by technological change, and we can discuss the more important of these in terms of cultural values, economic structure, and social relationships.

Technological Change and Cultural Values

Technical assistance comes chiefly from the West. It comes, therefore, in terms of Western values and a Western view of the nature of man. Here lies the root cause of much of the tension arising from technological change. Under-privileged peoples desire Western skills and knowledge and Western technological 'know-how', but for the most part they reject (albeit they often do so unconsciously) many of the other values of the West, whether religious, metaphysical, ethical, or aesthetic.[7] When these appear to threaten their own values or basic securities, tension and resistance arise.

What, then, are some of these essential differences in values? In the first place, Western civilization places great emphasis on the uniqueness of human personality and upon its individual lifespan. Many non-Western religions, whilst believing equally in the value of individual human souls, do not think in terms of the human life-span of each individual. Inevitably this has repercussions on attitudes towards death, disease, infant mortality, immunization, and even a view of human material well-being.[8] In the same way Western religion, morals, and legal systems throw upon individual man the responsibility for his religious, ethical, and social conduct. 'Individualism', indeed, is the dominant theme of Western culture. This is rarely so in non-European under-privileged societies. The individual, though important, is not all-important. He does not take precedence over the ancestors and his family in China, nor over his family and tribe in Africa; neither would he rank as of equal value to other individuals in the caste system of India. 'Individualist' behaviour in many societies is reprehensible and is dealt with severely, for deviation from the cultural norm is not conducive to the perpetuation of a closely knit social structure. Thus many

[7] K. M. Pannikkar, *Asia and Western Dominance*, 1953, brilliantly analyses this theme in its historical context.

[8] *Cultural Patterns and Technical Change*, 1953, p. 307.

under-privileged peoples fail completely to understand 'individualist' conduct, and in the contemporary scene current economic philosophy, particularly as expounded in the United States, makes no impression upon them at all, unless it be to provoke a dissident reaction.

Again, behind the Western concept of 'improved standard of living' there lies the assumption that all we have to concern ourselves with relates only to material living. We want greater comfort, less sickness and disease, more leisure, more labour-saving devices to reduce our dependence on the economic machine which drives us relentlessly on. This is not so in many non-technological societies. To the Western observer there is a great deal that is wrong with the standard of living of the Masai of East Africa: yet no Masai would agree with this. For him there is no sublimer life than tending and herding his cattle. He would pity the unfortunate European who could not share his idyllic existence. A 'better' civilization has no attractions for him, and he has resisted very successfully European cultural penetration.[9] Only when European or Western technological society is admitted to be superior in certain aspects, for example in its ability to conquer the physical environment, and when the means by which it does so are desired by other peoples, does the way lie open for cultural penetration. Again, where the individual in a non-technological culture is not himself the focus of its values as he is in the West, an increase in material wealth may not necessarily mean for him an increase in his standard of living. It may mean, as it does particularly for the Chinese,[10] the Greeks,[11] and African peoples,[12] an increase in responsibility towards the members of his family, who will look to him as a more successful member for sustenance or other assistance.

The West, moreover, regards life itself from a different angle from many other peoples. The analytical and scientific mode of thought that developed in Europe from the Renaissance onwards, to bear fruit first in an Industrial Revolution and now in an Atomic Revolution, splits off man's living into specialized categories. He is accustomed to consider the universe in terms of its physical, chemical, and biological parts,[13] even to view his food, his life, in their (to him) component parts. So, too, his work is specialized. But though it is the prerequisite of material progress, specialization promotes the

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[9] Indeed, the reverse is sometimes true. The effect of the Masai's arrogant belief in his own way of life has had almost an atavistic effect on many European officers who have worked with him. These officers contract the disease of 'Masai-itis', which leads them to considerable admiration and defence of the 'noble savage' and his values. Cf. also Elspeth Huxley, *The Sorcerer's Apprentice*, 1948, pp. 96–7.

[10] *Cultural Patterns and Technical Change*, 1953, p. 307.

[11] *Ibid.*, p. 261.

[12] Lord Hailey, *An African Survey*, 1938, pp. 604–5.

[13] Spicer, *op. cit.*, p. 16.

atomization of society so that ultimately religion loses its meaning for conduct, work has no connexion with recreation or aesthetic satisfaction, art and literature become confused, man loses his bearings and seems lost, because he knows not why he exists. Western society, then, is a 'large-scale' material society,[14] in which material profitability is often the criterion of personal worth and economic enterprise. Closely linked with it is the concept of power, which springs from material strength, whether in terms of the individual or of the State. Since no man can, because of specialization, adequately know enough of all fields of knowledge through first-hand experience, literacy is highly prized, because it is the key to other men's knowledge. There is, for the same reason, a high degree of impersonality, but concomitant with it, a high degree of social mobility.[15] Change is not feared, even though its rate and scale may be considerable, because it is seen as 'progress.'

The values of an under-privileged society usually differ greatly from these. It is a 'small-scale' society,[16] closely knit in terms of its customs and beliefs. Since these are usually the result of a slow learning process, they are firmly adhered to by most members of the culture [17] and tend to become exclusive in character.[18] Conformity to custom is a prerequisite to acceptance in the group or society. There is little specialization, and therefore little material development. Relationships are, for the most part, personal and on a face-to-face basis. Change, though by no means unknown, is frowned upon, for custom is so strong that it lays down a pattern of living judged adequate for the circumstances in which any man may live and pursue his daily tasks. When change occurs, as occur it must, it is small in rate and scale, and causes little disruption in the cultural pattern.

There is, then, a fundamental difference between the values of a technological and a non-technological society. Yet Western planners of change and the under-privileged peoples themselves have failed to appreciate the relationship between cultural values and technological change. They have not seen that technical skills and knowledge cannot be divorced from other aspects of the culture which gave them birth, but particularly from Western modes of thought and Western value-systems. Even less can they be integrated, shorn of their cultural trappings, into alien cultures having different modes

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[14] G. and M. Wilson, *op. cit.*, Chapter 11.

[15] *Ibid.*, Chapter 11.

[16] *Ibid.*, Chapter 11.

[17] Spicer, *op. cit.*, p. 286.

[18] M. Polanyi, "The Stability of Beliefs" in *The British Journal for the Philosophy of Science*, Vol. 3, No. 11, 1952, argues that the Western scientific mind is not free from exclusiveness, but that the beliefs in science are as much religious beliefs as the beliefs in religion, in magic, or in Marxism.

of thought and different value-systems, and be expected to maintain their same original efficiency. In the past, when the essential values of Western civilization were presented to Oriental peoples like the Chinese and Japanese in their purest value forms, as they were in the sixteenth and seventeenth centuries, these values were rejected almost universally, for they were clear to see and conflicted strongly with local values.[19] It is only when the essential values are concealed, as they often are, at least in the initial stages, in the mechanical skills, that their absorption into alien cultures is successful. It seems, however, that it is only a matter of time before the 'value' core asserts itself, in the shape of dependence on other aspects of the skills-producing culture, and then disintegration may start. It is for this reason that Toynbee believes that the most successful penetration of a culture occurs when only a 'splinter' from another culture is the intrusive agent.[20] The fundamental problem, then, is to evaluate technical skills and knowledge in terms of their cultural values and to present them as such. If the skill or technique is so ardently desired that the value, too, is accepted, then the process of technological change, though in no whit diminished, may become less productive of tension.

Technological Change and Economic Structure

Modern industrial society in the West practises specialization in the economic sphere: this is the prerequisite of the materially progressive society.[21] So a man may be a bricklayer, a carpenter, a clerk, a machine-hand, or a scientist, but his work may have no relation to other aspects of his living. Unless he works on the land, even the rhythm of his work may not be his own; it is dictated for him by a machine. Specialization also leads to the production of goods for other than personal consumption. They are sold for profit, and this, not skill in workmanship, personal usefulness, or aesthetic pleasure, is the yardstick by which efficient production is measured. The money economy, in effect, divorces production from subsistence.

In its most efficient form specialization becomes mass production, which further breaks down the worker's function. Whereas formerly he may have made a whole button, now he only turns a nut. The scale of industry becomes so large that management becomes remote from labour, the worker is remote from the finished product, and a whole administrative class becomes necessary to control the size of the enterprise. Local crafts and small industries cannot compete with this ultra-specialization, and survive only with great difficulty or die out completely. Incentives to greater production can no longer be made on the basis of the product or pride in workmanship. These are not valid where the worker does not see

[19] A. Toynbee, *The World and the West*, 1953, p. 59.
[20] *Ibid.*, pp. 67–8.
[21] G. and M. Wilson, *op. cit.*, p. 81.

the end-product of his labours. Thus other incentives have to be sought, such as patriotism (preventing national bankruptcy), financial bonuses on units produced, or competitive targets between neighbouring units of industry.

These are the economic patterns which technological change would introduce into the non-technological society. The latter, by its very nature, is different in economic structure. Such a society has little or no specialization.[22] Man works, not for profit but for his own subsistence, with perhaps a little extra for barter or emergency. He has his own conception of a 'standard of living'. Thus, if he has enough food for himself and his family, and can satisfy his few daily needs and wants, he is content. He sees no sense in continually trying to increase production by more efficient methods. It is a fallacious assumption to believe that all peoples naturally have an incentive to better their standard of living. The workers of Puerto Rico, the Spanish Americans of New Mexico, the peoples of many parts of Africa and elsewhere, amply disprove this.[23]

Articles, again, are usually produced for private use in the underprivileged society, and give aesthetic as well as utilitarian satisfaction. Man sets the rhythm of his work, and when the task is finished he relaxes. He, or his wife, may work hard when there is food to be produced, water to be drawn, firewood to be gathered, crops to be attended to, or a ceremonial to be prepared for,[24] but when the demand for immediate action is satisfied, he does not continue to work. Personal need or satisfaction are his incentives and he would fail completely to appreciate the value of work for work's sake, or its erection into a virtue as in Western civilization.[25] This may possibly explain why so many of these peoples, certainly in Africa, prefer 'piecework' (that is, the allocating of a definite task as the day's work, after which the worker may go), rather than working for a daily term of hours which bears no relation to the task in hand. When the task is the criterion of work a man can set his own tempo, but the machine never lets him do so.

A different conception of time thus obtains among technological and non-technological peoples. It has been said that for the latter "time is seen as a process rather than as programmatic,[26] for it centres around individual people and individual situations, and rarely has any larger framework which stands outside these.[27] Thus labour-saving machinery is differently viewed in the two types of

[22] Cf. G. and M. Wilson, *op. cit.*, p. 41.

[23] *Cultural Patterns and Technical Change*, 1953, p. 261, and Hailey, *op. cit.*, pp. 604–5.

[24] *Cultural Patterns and Technical Change*, 1953, p. 261.

[25] Cf. Nineteenth-century attitudes to work in Britain when application to work and industriousness were justified on theological grounds.

[26] *Cultural Patterns and Technical Change*, p. 262.

[27] G. and M. Wilson, *op. cit.*, pp. 95–8.

culture. In the West the principle of saving labour has as its goal greater efficiency and greater production, or, more recently, these have tended to be combined with a social ideal, the providing of greater leisure to offset the deleterious effects of industrial monotony. Increased productivity, as we have seen, is not a valid goal among non-technological peoples. Labour-saving devices are, as a result, looked upon as interesting and useful modern techniques, but as nothing more. If, in a subsistence economy, a man has enough to eat and a little to spare, and if his other wants are reasonably satisfied, why should he save time? Sometimes, indeed, increased leisure may prove not a blessing but a curse. In short, " work is neither a virtue nor a necessity, but merely a way of life ", [28] or, as the followers of Mahatma Gandhi say, " Work is prayer."

More than anything else, it is the introduction of a money economy that has torn the greatest holes in the fabric of non-technological cultures. Money may exist in a culture, as in Burma, and yet its economy may be a money one.[29] But when the increase of money, or profitability, enters in as the chief incentive to production, it becomes a money economy. Thus, in an agrarian community 'cash-crops' begin to make their appearance. These slowly take precedence over subsistence crops, leading, on the one hand, to a dangerously ill-balanced economy—the one-crop economy—and on the other to malnutrition, since food crops are sacrificed to cash-crops.[30] Where industrial undertakings are established, as in the Copperbelt of Northern Rhodesia and the mining areas of many parts of Africa, labour is drawn off from surrounding rural areas to work in the mines for wages. Apart from the important social consequences, this leads economically to a decline in agriculture.[31] In tropical Africa, again, it was once the habit to lop the branches of trees and to burn them as a fertilizer, but when the young men went away to work the old men left behind were unable to climb the trees to lop the branches so, instead, they cut the whole tree down. This led to deforestation and soon to soil erosion, with consequent decreases in soil fertility and production.[32] The migration of workers from the land also affects the demographic pattern, for new towns spring up where once there were villages, and soon the growth of an urban proletariat follows. Among the worst effects of a money economy, however, are those which result in an exploitation of labour. Profitability as an incen-

[28] *Cultural Patterns and Technical Change*, 1953, p. 254.

[29] *Ibid.*, p. 256.

[30] Cf. the growing of cocoa in the Gold Coast. Also A. Lewis, *Industrialisation and the Gold Coast*, 1953.

[31] Cf. M. Read, *Native Standards of Living and African Culture Change.* Supplement to *Africa*, Vol. XI, No. 3, 1938, pp. 36–45. Also Hailey, *op. cit.*, p. 885.

[32] Hailey, *op. cit.*, pp. 879–85.

tive is kept within bounds in the West by other controls within the culture,[33] or is transmuted in some degree by the equality of opportunity which exists for workers to rise above their station.[34] Where, however, these controls do not exist, as they do not in a non-technological culture in the process of changing over to a money economy, exploitation is often serious, as it was with the cotton-mill workers of Bombay and the women of Turkey, who in 1914 worked fourteen hours a day.[35]

Technological Change and Social Relationships

It is in family relationships, however, that technological change has probably wrought the greatest havoc in many cultures. This is particularly so in the cultures of Africa. Here there has been an almost complete breakdown of the traditional family unit and of the social and economic system of the family group. In most old African societies, when wealth was measured in numbers of cattle and wives, only a mature man could expect to achieve wealth over a period of years, and when he did achieve it, with his position went prestige and leadership.[36] Now, after the impact of Western technological society, a man may earn more than his father and, if he wishes, can buy the traditional forms of wealth long before his time, and with it achieve authority over people normally senior to himself.[37] So the position of traditional authority has been undermined, parental authority has declined, a younger 'progressive' generation has grown up which is restless of authority and finds traditional sanctions and customs irksome. A widening breach has opened between them and the older generation.

Parental authority has been undermined for other reasons also. The migration to urban centres of able-bodied workers, as in Nyasaland and the Rhodesias, Kenya and South Africa, has left the children to be brought up by their mothers and other relations back in the rural areas. The traditions of the group have not been passed on, and juvenile delinquency has quickly become a problem in many African countries. Meanwhile, with the young men departed to the industrial centres, no husbands are available for the young women left behind in the rural areas, and these, faced with an unattractive situation, either contract liaisons with older men or run away to the towns to join their menfolk. Whereas in the rural areas women outnumber men, in the urban areas men far outnumber women, and

[33] E.g. Child Labour Legislation and Factory Acts.

[34] As in the U.S.A.

[35] *Cultural Patterns and Technical Change*, 1953, p. 254. Cf. also S. H. Frankel, "The Position of the Native as a Factor in the Economic Welfare of the European Population in South Africa" in *The Journal of the Economic Society of South Africa*, Vol. 3, No. 28, quoted in R. Phillips, *The Bantu in the City*, 1938, p. 52.

[36] Cf. M. Read, *op. cit.*, pp. 25–6.

[37] *Cultural Patterns and Technical Change*, 1953, p. 256.

prostitution becomes widespread. In the same way the marriage contract has changed its nature, and in many cases it has broken down completely. Under traditional African custom 'bride-price' was paid by the family of the bridegroom to the bride's family on marriage. This was a token of good faith, and a guarantee that man and wife would not lightly let their marriage break up, whatever the reason.[38] Nowadays, however, the extended family no longer exists in its old authority, the bride-price is paid in cash by the bridegroom to his bride, and if the marriage breaks down there is often no restitution.

In some cultures, however, notably in those of Greece, China, and Japan, family values proved initially so powerful and all-pervasive that they were able to modify technological change, with the result that family patterns were often imported into industrial enterprise. Thus employees could not always be dismissed for poor work, because their employer was 'responsible' for them. What the European would term nepotism was often morally prescribed; there was a moral obligation to find your relatives a job, whether or not they were capable or suitable. Attempts on the part of private employers in private firms in China to introduce new values into industry and to reject local ones were met by a storm of protest and much upheaval.[39] Yet, even in China technological change soon meant that "family relationships are more and more disregarded in property ownership".[40] With the break-up of traditional family relationships there often resulted a shattering break between the living and the all-important dead members of a family unit. When power machinery was introduced the Chinese was slowly forced to abandon a whole ideology "for dissatisfaction with the ways of his fathers in one particular meant doubt of his father's way of life in all its aspects. If the old loom must be discarded then a hundred other things must be discarded with it, for there are somehow no adequate substitutes." [41]

So technological innovation pursues its ramifications through every aspect of the non-technological culture, whether social, economic, or religious. It has come near to defeating, in many cases, the purpose for which it was introduced, and left peoples unhappier and more confused than they were in their former state. Technical innovation, it is now realized, cannot be successful unless its effects can be controlled.

The Control of Technological Change

It is clear that the aim of technological innovation as originally put forward, namely, to raise the standard of living of the peoples

[38] Cf. L. S. B. Leakey, *The Mau Mau*, 1953, pp. 74–5, for a description of this as it applied to the Kikuyu.

[39] *Cultural Patterns and Technical Change*, 1953, p. 262.

[40] *Ibid.*, p. 257.

[41] *Ibid.*, p. 257.

of economically under-developed areas, is no longer sufficient by itself. The aim has to be qualified: it must be to raise the standard of living with the minimum loss of cultural integrity.[42] This essentially changes its whole character and brings in a series of new problems. For example, it is obvious that technological innovation is no longer merely a matter of making available new technical and scientific skills and knowledge. It is now equally as much a matter of accommodating these to human situations and human behaviour patterns. Predominantly, therefore, we are now concerned with human relationships and psychological insight into human behaviour and motivation.

Yet those who seek to explore this field in human culture will find the path strewn with thorny problems. One factor, however, stands out as of crucial importance: that of the innovator himself. It is obvious that his double responsibility will throw a heavy responsibility upon him as a person. There now rests upon him a personal, moral responsibility, which stands outside those things he seeks to transmit, to see that the mimimum of human unhappiness will result from his interaction with the people he seeks to serve. It is, then, not sufficient that he be merely a skilled technician; he must also have some competence as a social scientist. He must be able to analyse the culture in which he is working, so that he may the better estimate in which directions the effects of technical innovation are likely to flow. Whether, indeed, he can do this is doubtful, unless he receives the full and rigorous training of a professional anthropologist; nor, even then, is it certain that he will be competent to do so. The English school of functional anthropologists, including many former pupils of Malinowski, who popularized the approach to human culture which stresses its integral nature,[43] is the first to admit the difficulties inherent in such a study,[44] even though they themselves have specialized in the study of the impact of European culture upon non-European peoples.

Nevertheless, certain principles appear to have become well-established on the basis of field experience, and they afford the innovator considerable guidance. The first of these is that he must approach the culture in which he is to work in the full sense of its wholeness and oneness. He has to be aware of the close inter-relation of custom and belief within a culture, and his main task

[42] *Cultural Patterns and Technical Change,* 1953, pp. 12–13.

[43] Cf. Malinowski, "Social Anthropology," *Encyclopaedia Britannica,* 14th ed., 1929, XX, p. 864: "Culture must not be treated as a loose agglomeration of customs, as a heap of anthropological curiosities, but as a connected living whole."

[44] Cf. A. I. Richards, "Field Work Methods in Social Anthropology" in *The Study of Society,* ed. Bartlett (Ginsberg, Lindgren & Thouless), 1946 ed., pp. 292–3, and J. T. MacCurdy, "Psychopathology and Social Psychology," *ibid.,* p. 54.

must be to find the links between its different aspects. Without some knowledge of these he will fail in great part to control the effects of technological change, for " customs and beliefs are linked into a whole, and changes in one aspect of life will have repercussions on other aspects. This interdependence is an elementary fact."[45] Again, people act not only as individuals but also as members of groups, for these, whether formal or informal, are created by them to promote their social and political ends. Together they form a people's social organization and provide the channels by which they seek to pursue their goals. No innovator can hope to promote successful technological change, in the sense in which we have defined it, if he remains ignorant of a people's social organization, for knowledge of it provides him with one of his most vital resources.[46]

It is not sufficient, however, that the innovator should merely know the culture he works in and have some knowledge of its social organization. He must also be able to evaluate himself and the culture from which he comes. For he is as much influenced by the attitudes and beliefs of his own culture as are the people he serves by theirs. Unconsciously, we all look at other peoples with preconceived ideas of what is good, sensible, and rational, and little realize that many of our values are not universals. Unless, indeed, the innovator can assess his own 'cultural bias' he will be unable to appreciate objectively the reactions of people, both to himself and to the technological change he seeks to promote. It has been suggested that it is part of his duty so to evaluate the culture he works in and the culture from which he comes, that in effect he can be outside both and look at each objectively. He has, in other words, to become to some degree acultural. It is extremely dubious whether any person can possibly do this, though we are all, by working in cross-cultural situations, able to achieve some degree of it. The solution to this problem surely lies, not in losing our values, but in cultivating the qualities of sympathy, tolerance, and understanding which would restrain us from seeking to impose them on others, whilst at the same time deriving maximum security from them ourselves.

Important, however, as the innovator undoubtedly is, he is not the most important factor in the process of technological change. The most important factor must always be the people themselves who undergo change. We stressed earlier that they fear change because it is an unknown quantity, because they do not understand it or are forced to change against their will, but most of all they fear it when it appears to threaten their basic securities. How then can these fears be modified or dissipated? The answer must lie in a

[45] Spicer, *op. cit.*, p. 17.
[46] *Ibid.*, p. 289.

truly democratic approach by those promoting change to those who are undergoing it. If people themselves participate fully at all levels of planning, if they are not 'manipulated' to change against their own better judgement, then technological change ceases in great degree to be an unknown quantity, or to be misunderstood. People begin to understand what is happening, and themselves reinterpret change in the light of their own goals and values. They see the point of technological change. As they do this, so resistance is likely to diminish. But if, after the full processes of participation, planning, and understanding, a people themselves still reject technical innovation, then the instigators of change, whether they be foreign or local experts, private firms or State-directed enterprises, have no moral right to force them to do so against their wishes. A long-term policy of education then becomes necessary to educate people to the need for change. If change is pushed ahead against the wishes of the people concerned, it can only be from motives of self-interest on the part of the planners of technological change and in the end it will be likely to defeat its own purposes. To eliminate the element of self-interest from technical assistance, whether such assistance springs from humanitarian, strategic, or political motives, is one of the most difficult problems we face to-day.

The third factor in the process of technological change is that of the technical skill, tool, or knowledge itself. This is a factor which is closely connected with the concept of cultural integrity. We know now that a tool or a skill, superficially isolated though it may appear to be, is in fact dependent in many ways upon aspects of the culture from which it comes. Thus a tractor—in one respect a simple tool to promote better ploughing—is dependent upon a marketing system and a money economy for the fuel and spares necessary for its efficient functioning. It has to be maintained and serviced by skilled mechanics, who themselves will probably have been trained in an industrial framework, where among other things they would work for fixed hours daily, for an agreed wage, where they would not be able to leave their work without prior arrangement, and where to a great extent they would specialize in the repair and maintenance of internal-combustion engines, learning nothing of the plough the tractor pulls, the seed it sows, or any other factors of the agricultural operation it performs. A tool, therefore, as well as a skill or some part of technical knowledge, is itself a part of its culture in the same way that a value or belief is. This has important consequences, for it means that a tool or technical skill incorporated into an alien culture can become, in effect, what Toynbee would call a "poisonous splinter".[47] It can itself start the chain-reaction leading to cultural disintegration. Some have thought, however, looking at the damage such a cultural strand can

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[47] A. Toynbee, *op. cit.*, p. 82.

do, that if it could be stripped of its cultural trimmings it might be rendered more innocuous and at the same time more capable of assimilation into the value-system of another culture. The important assumption behind this belief is that it is indeed possible to strip a tool or skill of its cultural 'accretions', and to present it to another culture in what might be called its stark, cultural nudity. The facts of experience do not seem to indicate that it is. "It is desirable", says UNESCO, "to strip these technological practices of so many extraneous cultural accretions (from the land of origin) as possible. This applies to such things as mass production, immunization, and so on. It is realized that the technologies and inventions of modern science are themselves the outgrowth of a very particular, historically limited type of culture. . . However, once invented, a particular device may be used effectively by people within whose culture that particular invention might never have been made." [48] This applies, moreover, not only to "stripping scientific practices bare of the particular habits of the Western society in which a practice was developed, but also to the advisability of leaving behind the particular rationalization and sanctions, both religious and scientific, with which a specific practice may have been associated in a given Western country." [49]

There are a number of dangers in thus attempting to secularize technical skills and knowledge. The innovator, if he comes from the same culture as the skill, must also divest himself of his cultural 'accretions', for otherwise the whole purpose of stripping the skill which he is propagating will be destroyed. Yet we have seen that this is an extremely difficult thing for him to do, for it means that he must, in effect, place himself in a cultural 'no man's land'. It has also been suggested [50] that the innovator should attempt to work through those values which are common to the whole of mankind and which are roughly represented by the basic ethic running through the great religions of the world. These are the "intercultural values valid in cross-cultural situations".[51] Yet, in effect, this is only part stripping, the assumption being that the innovator is able to analyse his own personality, discard values which are not common to other cultures and retain those which are. Since custom and belief in any culture, however disintegrated, still maintain their interrelatedness, this likewise appears to be an almost impossible task for the innovator to accomplish. It also denies the 'oneness' of personality and the integral nature of its structure.

On the assumption that it *is* possible to secularize technical skills, the next step is a logical one. Having stripped it of its own cultural

[48] *Cultural Patterns and Technical Change*, 1953, p. 309.

[49] *Ibid.*, pp. 309–10.

[50] Cf. T. R. Batten, "Adult Education and Technological Change in Cross-Cultural Situations" in *Adult Education*, Vol. 26, No. 1, p. 195.

[51] *Ibid.*

values, the innovator must now proceed to integrate it into the value-system of the receiving culture. UNESCO has pointed out that though this may cause moral dilemmas for foreign personnel, it is a useful technique for facilitating technological change when used by members of the receiving culture.[52] Yet it is here that the moral problem arises. A man of no values is a man of no scruples, and the deculturized innovator, whether he be locally or foreign born, is peculiarly vulnerable to the temptation to manipulate the people among whom he works. Technical experts have themselves expressed disquiet about the morality of clothing technological change in the values of the culture undergoing it.[53] They have doubted whether it is possible to embed modern scientific practices in age-old systems of religious values. How, in any case, can the secularized expert who believes in no values,[54] and plainly shows it, be expected to search the Holy Writ or the Koran for a suitable text with which to clothe his innovation?

The answer to this whole dilemma surely lies in a different direction, namely in the holding fast to our own values, at the same time developing those qualities of sympathy, patience, understanding, and tolerance which will prevent one from forcing them on other people. People generally, and under-privileged people in particular, do not resent others because they possess a coherent system of values different from their own. They resent them only when they attempt to force them to accept these values also. But they despise a man of no values. So, too, is it with a technical skill or tool. To strip these, or to camouflage them, or to attempt to integrate them into the value-system of another culture, is simply an oblique form of manipulation. Will not a people who desires a skill or technique perform the necessary value adjustment it involves if they see plainly what it is that is involved? And will they not be prepared to pay the price, if it be not too great? And will not cultural respect on both sides thus be saved?

P. C. C. EVANS.

[52] *Cultural Patterns and Technical Change*, 1953, p. 312: "Those who are engaged either in introducing technological change or providing for a cushioning or muting of the effects of technical change, have become increasingly aware, during the past few years, of the advantages of couching a change in terms which are familiar to a given society, in supporting a new practice by quoting an old sacred text."

[53] *Cultural Patterns and Technical Change*, 1953, pp. 312–13.

[54] Or perhaps in a set of secularized scientific beliefs.

CHAPTER TWELVE

PRE-EUROPEAN EDUCATION FOR BOYS IN AN ANGOLA TRIBE

ANGOLA Africans have been in contact with the influence of European civilization for four hundred and seventy years through the Portuguese and through ten years of Dutch occupation. Until the last fifty years this influence, always variable, has been restricted largely to the coastal area. The Arabs, although they have been in contact with the Africans in Angola for many decades through slave-raiding and trading and had fifty years or more ago a settlement in Bié, have had little influence. Industrial development has started only very recently.

Among these Angola Africans there is a major Umbundu-speaking population which may well serve as a case-study of the conditions in which Western technology, and its educational instrument, must function if the material living standards of the area are to be substantially raised. This Umbundu-speaking population is composed of two groups: the Ovimbundu, a Bantu tribe of diverse origins which occupies the highlands of Benguela and numbers a million and a half; and a mixed African group of about one-half million who use the language as a second tongue. This population has changed but very little, and to the extent to which it has not changed is reasonably characteristic of other Central African Bantu people where uncontaminated with European culture.

Educational Influences of Former Days

Education in its broadest sense is an equipment for life, and not alone ' book learning ' or the three R's of the formal European school system. The Ovimbundu had none of this latter. But preparation for life in its material and spiritual aspects has been a prominent part of the tribe's traditional culture. Africans without knowing the word have been remarkably good educational psychologists. They have begun their training of the child at a very early age. And they have closely linked their education of the child with the life patterns of their community, an 'education for life' and an 'education through doing.'

The instruments for this education have been of two basic types: rituals of committal and initiation, which have identified the youth with his tribe, cultural pattern, and guild; and occupational experience, which has transmitted to the youth the skills, traditions, and

mores of his people. No educational policy for technological advancement which ignores these two traditional educational instruments can possibly be successful.

The first of these, rituals of committal, is composed of two factors: one community and the other individual. The community factor is a form of baptism in which the village chief takes the child in his arms, and, having filled his mouth with sweet beer squirts it over the child's head in token of its incorporation into the community, which as a collective whole then assumes responsibilities towards the child. In puberty this baptism rite may be extended by filing the two upper middle teeth to form an inverted V which marks the youth for ever as a responsible and privileged member of the tribe. The individual factor is that of name-giving. At birth, the mother gives the child a secret name, which is communicated to the youth later in life as an inviolable secret.

Thus in Ovimbundu communities the real name of a child is unknown save to the child and its mother. Behind this lies the belief that name not only represents personality but is, indeed, personality. To know the name is to have power over a person. This explains the disconcerting African habit of frequently changing names. Assumed names, 'official' names, names which signify the function of the individual in the community there are, and are known. But the real name remains hidden. All Umbundu names have significance. The first child born in a new village is called *Kanganjo* (little brush fence); one born when the houses are built is named *Lumbo* (fence of stout poles), and one born on a journey *Kangende* (little traveller). Names in a community form part of an educative and historical process. Names are not meaningless details but involve responsibilities.

Initiation is both ritual and extended experience. The first initiation is that of manhood, and permits the youth to enter into educational contact with his elders as a peer.

The boy remains with his mother until he attains the age of 7 years (a mystic number), when he is graduated into the men's palaver-house group. This palaver house is round, with a tall pointed roof, its black and shiny thatch perched on heavy hardwood slabs, whittled to a given size, with openings between the slabs for ventilation. Within it the sacred fire is maintained by three logs brought to a point. The name given to a chief's reign is his *ondalu* (sacred fire), used also euphemistically for the genital organs. Round the fire on stools sit the elders. The call drum and the drums for dancing stand on one side along the slab wall, and bones, indicating to all visitors the good eating of the men, are suspended from the roof.

The day the young boy enters the palaver house is of great importance for him. He is recognized by the old men; he has become an individual of potential importance and consequence. He sits on the floor, listens avidly and speaks little. He absorbs the proverbial

lore of the tribe and its history. He hears correct speech, and it is noteworthy that African children speak more grammatically than many a European child. The lad observes the 'saying of grace' as the elders throw crumbs on the ground to acknowledge the spirits of the departed who are thought to live underground. The food is eaten in common. The womenfolk bring their own pots of mush and relish to the palaver house. When all the food has arrived the communal meal begins, the pots are passed from one to the other but the young boy waits until the old men have eaten before receiving his portion. He will pour water over the elders' hands and fingers. His training in good manners is carried farther when he notes how the pots are carefully placed at the entrance to the palaver house so that the women may easily gather them up, it being tabu for a woman to enter.

Certain details of etiquette are taught. A lad never should pass behind a person, this constituting an indication of hostility. Nor would he pass in front of a person without bowing and placing the left hand on his left knee, and snapping the fingers of his right hand. This constitutes a request to pass and, incidentally, indicates that no hidden weapon is carried.

The men's conversation in the palaver house constitutes a valuable factor in the educative process. Tribal history of failures and successes is recounted. The past is idealized by the elders; in their youth or before the white man arrived, heaven touched earth with glory, food was abundant, droughts were unknown, excess of rain was unheard of, for the chiefs of those days controlled the heavens and brought rain or prevented it as occasion demanded; cattle diseases did not exist, game abounded, and they were rarely hungry for meat. Proverbial lore soaks into the lad, proverbs and adages with folk-tales constitute an expression of the common law of the tribe; law cases may turn on an apt citation of a proverb unless the defence advocate counters it by one to the opposite effect. Wits are sharpened in this process; no advocate would weary his audience and the jury of elders by quoting a proverb in full, but contents himself with giving the first word thereof.

Some proverbial tales are long-drawn-out affairs, not infrequently divided into declamation and song. But usually they are short, pithy, sayings. Whether short or long they contain sound social morality; occasionally they do not seem to accord with European attitudes, but the total effect is good. The African lad acquires a philosophy which stands him in good stead. Take for example the proverb, "The eye is a coward, the leg a hero", an analogy from caravan journeys during which the leader may point out a far-off-hill as the destined camp site for that day's march. An estimation of the distance makes it seem an impossibility; the legs, pegging away step by step, hour after hour, reach the goal. It is a picturesque way of inculcating perseverance.

Initiation does not end with admission to the palaver house, in recognition of simple physical maturity. It continues with the gradual maturation of the youth, in recognition of the skills he acquires. It is marked by circumcision and a variety of physical endurance tests.[1] If the lad becomes a real person, he may, if his family belong to the right social scale, be invited to become a member of the Blacksmiths' Guild (*ovivinda*), an honour which exceeds all others and which gives the one concerned the status of nobility or the equivalent of a high degree in freemasonry. To become a member of the totemistic society of the Ox is a lesser attainment, but one which carries its own weight in the community, chiefly the negative side of high-handed police action. The blowing of this society's reed horn awakens dread in the hearts of people, especially among the women and children.

The traditional Ovimbundu educational practices have not, however, been limited to rites of committal and initiation. They have been solidly founded on apprenticeship training, direct experience in the occupations of the tribe, and personalized instruction from older members of the family.

The caravan journeys are very valuable educationally to the budding youths. They drink in stories of remote Garanganze, of the Lualaba (upper Congo), of Jenje (Barotseland), of the Great Lakes, of Tanganyika, or of nearer Dilolo, and hear of curious people with strange customs and awkward houses, of lions, elephants, leopards, and giraffes encountered by their elders, and of attacks by wild men. The preparations for the journey thrill the lad; food to be pounded, relish arranged, goods for trading acquired, salt, gunpowder, beads, cloth bought at the coast three hundred miles away, and home-grown tobacco. Carriers are contracted, although many of these historically were slaves, and loads are assigned. The leader and the rearguard are selected. The lad, afire to go, is told that he will be given, as a trial, a small load of about fifteen pounds' weight compared to the eighty pounds' weight carried by an adult. Any lad unwilling to go is rallied with a caustic proverb which runs: " Rabbit sitting aways in one place found disaster! " The caravan leaves amid high excitement, those who remain at home pray for its success and safe return. Discipline is demanded of the youth on the journey, and he learns obedience. He must do nothing stupid, nor speak injudiciously when going through potentially hostile territory. He is reminded of the proverb: " The remedy (fetish) for the mouth is to keep it shut."

During the journeys the leaders, when they fix camp, give a certain portion of the goods to the lad and send him to the nearest villages to buy food. This is to test his trading abilities. The lad

[1] J. T. Tucker, *Africa*, January 1949, pp. 53–60, for description of the ceremony.

when he returns to camp has to give an account and is praised or blamed according to his success or failure.

The journey may seem interminable to the apprentice, when the leader will cite a proverb: "We have crossed the Kuanza river after all this marching, but the Kasai river lies ahead, we have to pass through the hungry country and long stretches of sand and waterless desert; it's even harder than before!" Bravery is essential, and no tears must be shed by the neophyte.

The educational values of such journeys, which take from six months to two years all on foot, are clear. Detailed observation is made possible; new countries, new foods, new animals domestic and wild, new houses, new rivers, new trees, all came within the purview of the 'grand African tour'. Spiritual values are associated with such journeys. The owner of the caravan secures a priest to ward off ghostly perils and purchases a number of fetishes from the country through which the caravan will pass, on the henotheistic theory of many gods with local jurisdiction which must be respected. The excitement on the return of the caravan is indescribable. The elders recount their prowess in trade, show their gains in slaves (historically), elephant tusks, and rubber. The status of the youth, who also recounts his experiences, rises.

Another important item in the youth's education is bush lore. He will be shown, in the bush, a plant whose root is good for lung trouble, another whose leaves are helpful for rheumatism, another for fever, still another for stomach disorders. The guide on these expeditions reveals a knowledge of poisons which would astonish outsiders. "Here," he says, "is a root used for poisoning fish, though harmless to man; this one is a slow poison, taking months in its operation but never failing in its fatal purpose." Love potions are also indicated. The use of various trees, roots, and shrubs in house building are also acquired—these for stakes, these for door boards, these for rafters, these for binding, this barkstring for tying the thatch. Also the values of different kinds of grasses for thatching are indicated, based on durability and imperviousness to water.

Still another item in the youth's education is craft training in one of the traditional occupations. Perhaps the most impressive is that of iron working and blacksmithing. This is much more than a simple trade; it is an ancient art, involving rituals and ceremonies. The writer, some years ago, described this art and its attendant rituals as follows:

> The art of smelting iron has been known for generations among the Bantu and is entirely a native art. To-day, a French authority writes: "I feel convinced that we are indebted to the Negro for the keystone of our modern civilization and that we owe to him the discovery of iron."
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> The smiths form a guild, and believing that the art was revealed by God to their fathers, who had previously cultivated by wooden hoes, no smelting is begun without ceremonial rites and the work is accompanied by continual singing of choruses and intervals of dancing. The ore is

dug annually from the mountainside and brought home to the village, where it is smelted outside the village stockade. During the period of work certain strict regulations must be followed and infringement involves a serious fine. No woman is allowed to enter the men's camp.

The fire for smelting or for smithy work is kept going by bellows hollowed out of a single block of wood consisting of two chambers with an elongated tube having two openings. The projecting tube of the bellows is inserted into a baked earthenware tube, the base of which is in the fire. Sitting on the ground the blacksmith's assistants with vertical motion work alternatively the two sticks attached to a skin over the chambers of the bellows, thus producing a continual current of air. Hoes of Egyptian pattern having a groove down the middle from the base of the spike to the lower edge are produced, whilst nails, bracelets, etc., are effectively made.

To make blacksmith's tools another significant ceremonial rite is necessary. After welding a sledge hammer, beer is brewed by the women, a fowl is killed and its blood sprinkled over the hammer. A young girl carries it, tied to her back, to the purchasers who will have given a large pig for it. The procession which accompanies the girl joins in choruses and the tool itself is called *osoma* (chief), for like the chief it is regarded as the sustainer of life. Without it there would be no axes to cut down trees, to make new fields or to produce boards, no hoes, no cultivation and therefore no food. To enter a village en route is not permissible; it would be 'defiled' and 'unclean' rain (hail) would result. Further native etiquette forbids people to go to their work if the chief sleeps overnight in their village. Not to interrupt the daily routine of village life an honourable compromise is effected by the tool 'sleeping' in the bush.

An apt proverb is derived from the blacksmith's art. *Atemo a Ngola tu limbukila vulengo*—a hoe of Ngola is recognized by the way it lasts—a person's character is recognized by his staying power.

Good manners are much esteemed and training therein is a part of the education of an Umbundu lad. In May, following the six or seven months of the rainy season, the *osoke* grass has grown to a height of from six to ten feet according to the soil. Its seed is coarse and sharp, and if one of them enters the eye a painful inflammation sets in with possibly permanent damage to the eye. "Walk circumspectly through the tall grass," says the proverb, "let the eye (a superior) respect the *osoke* (an inferior), then the *osoke* will respect the superior." Let the man of high degree respect the one of low estate; let the elder respect the younger; let the rich respect the poor; the master his slave; the father his children, and reciprocity will follow.

Human dignity holds a leading place among Africans, and it may be affirmed that one of the fundamental failures of the European in Africa (the writer regards it as the most dangerous of all) arises from the disregard of this point of personal dignity of which the African has a highly developed sense. It is unhappily true that Europeans in general show little sense of self-restraint in the names by which they call the Africans, thus wounding their dignity. They will curse them, call them evil epithets, and on the slightest provocation use physical force. The debit side of these European attitudes

is a heavy one. " Be courteous to all your inferiors " is an important element in African education.

An additional feature of Umbundu life is that the lad, after the attaining of puberty, goes to his maternal uncle for his further education. Old Africans say the reason for this is that the father (who can only be presumed to be the actual progenitor), if hard pressed by debts, may be tempted to hand over his son as an *onjeke* (pledge: a euphemism for slavery); for the uncle this would be unthinkable. Thus, chieftainship succession is reckoned through the eldest sister of the reigning chief. In due course the uncle will marry the lad off to a worthy partner.

Finally, the Ovimbundu have had the rudiments of a formal communication system, even though they have not had schools. Thus, for example, they had evolved a primitive ideographic and number system prior to contact with European culture. It is true that natives have no books or written records, but a rudimentary form of reading and writing has been evolved. Here is a secret society, the *Ovinganji,* whose 'lodge' is to assemble at a given spot in the bush on a certain day when the sun reaches a stated height in the heavens. A written notice is passed around in the form of a large leaf with two holes pricked in the ends and a large oval rent in the middle; the holes representing two carriers and the oval the horn used at the ceremonies. The token is read by those initiated, having been written by those who have the wisdom. The 'mother' of the *Ovinganji* secret society also has her way of communicating with her 'children' A large square cross of iron fashioned by the company of native blacksmiths is carried by four men, one at each tip. Seeing the sign the members gather to the cross; the letter is well understood.

Missionaries, when they entered Central Africa, had not to introduce new words to signify 'writing' and 'reading'. The basis was there; education educed and developed what lay latent. Nor was it necessary to introduce the decimal system. Natives counted in tens (two fives, corresponding to the fingers on the hands) making the first ten, and so on up to hundreds of thousands.

Implications for Technological Development

What are the generalizations which may be drawn from this brief review of an essentially pre-Europeanized African culture? And what are the implications for African leaders and their foreign advisors in any future programme of technological development?

Two characteristics of the traditional educational pattern seem of fundamental importance. The first is that the social and moral behaviour of the boy is carefully developed through a variety of experiences and ceremonies. A thorough preparation for life in the tribe was linked with a belief in a mystical, superstitious authority for behaviour patterns. Secondly, excellence in these activities, and

social position, were recognized by election to a craftsman's guild.

Both of these characteristics must be respected, and in a major degree conserved, regardless of the process selected for technological change. Thus, for example, in making any proposed change in the methods of extraction and working of iron, careful account should be taken of the very close association of the craft with tribal morality and social behaviour. For, whilst there would appear to be no resistance on grounds of prestige (as in some more ' advanced ' areas of Africa where the white-collar worker has a higher social status) to technical work and development as such, any attempt by Africans to plant a new kind of seed, to smelt iron ore in any way save that which the generations gone by had used, to plant a tree, especially a fruit-tree, would bring dire consequences to the guilty perpetrator. Anyone who introduced such unorthodox methods would be regarded as being in league with the devil, or what stood for the devil in Umbundu theology.

Already the impact of European culture is beginning to be felt in the cultural pattern of the African of Angola. And the results are of mixed worth. Again, using the example of iron working, there is reason to regret the fact that certain short-sighted administrators in Angola have frowned upon the ancient art of *smelting* iron ore so common among the Bantu. There is indeed a danger that it will die out. One of the sections of Bantu in Angola have recourse to buying up from the traders old hoop iron and so on, from which they make knives, hoes, and other implements, all of inferior quality.

But the ability of the Bantu as *blacksmiths* can be said to have developed in such finely equipped shops as that of the Benguela Railway at Nova Lisboa in Angola. In these shops African smiths do most intricate work for the rolling-stock of the railway. Massive Garrett engines (made in Scotland) are repaired, overhauled, and cleaned with great effectiveness. The foremen are Portuguese, from Portugal, as a rule. Traders use African blacksmiths for their local needs and the Africans have great ability in tinkering with automobile engines. On the long, lonely stretches of Angola roads it is a great boon to have a Bantu along who is given to blacksmithing. He is expert at making something out of nothing! The simple things he makes serve his needs.

It is essential that the development of African training should be built on the principles of African psychology. The goal of African education was to produce men and women who would contribute social values to the community. ' A good man ' in African parlance is one who fits into the general life of the community, village and tribal, and is helpful in creating and sustaining the peace and prosperity of the group. Correct social behaviour is the standard of a falling or standing community. ' A good village ' is marked by co-operation and reciprocity. This principle accounts for the ancient custom of the African selling obstreperous youths into slavery: they

sought to save the body politic from destruction as experience has taught them that communities can be and are ruined by such persons. A stiff-necked uneducated individual is a menace not only to his own family circle but to the community. Having no depth he is sold away to stave off disorder. " It is expedient . . . that one should die . that the whole nation perish not " (St. John xi. 50) reflects African thought and attitude. In the same way the burning of witches and warlocks seemed to the past generations a necessary cleansing process. The witch-doctor (i.e. the doctor against witches) had thus an essential part to play, but this is another story with dark and bright sides to it.

In the opinion of the writer, the greatest contribution that Europeans have made to fundamental African education lies not in physical development, such as trains, automobiles, or aeroplanes, but rather in the abolition of the ancient clinging fear of entering any new path of development for fear of ghostly revenge from the spirits of the departed. Now this has gone, the road to wider life has been opened up with possibilities infinite even if unseen.

JOHN T. TUCKER.

CHAPTER THIRTEEN

RESISTANCE FACTORS IN THE TRANSFORMATION OF AFRICAN SOCIETY

WHEN Dr. Langham-Dale, Superintendent-General of Education of the Cape Colony, visited Lovedale Institution in 1864, he examined the most advanced African scholar in a portion of the Greek Testament, an ode of Anacreon, and the first book of the *Aeneid*. In addition the pupil demonstrated the 47th proposition of *Euclid*, Book I, and a geometrical exercise connected with it. He proved in every respect satisfactory. This is one of the most telling instances of the ability of the 'raw native' to absorb Western school knowledge directly and without a long period of adaptation.

One of the best helpers Sir Theophilus Shepstone had in the administration of native affairs in Natal in the middle of last century was a man called Ngoza. Although he had received only a scanty education, he was so successful a businessman that he ran a transport agency with several wagons and the necessary spans of oxen. He was one of the first Natalians to grow cotton and he experimented with other commercial crops. Finally, he was placed in charge of a 'tribe' of about eight thousand people, although he was a commoner. He dressed in the European way and was introduced to important visitors to the young colony. He represents the successful manager type a hundred years ago.

Chief Moshesh, by a happy combination of military and diplomatic skills, fused together the remnants of broken tribes in the mountain fastnesses of Basutoland and secured recognition of his country from both Boer and Briton in the rather reckless period of the later nineteenth century. This he achieved by playing off Boer against Briton and by accepting protectorate status in the nick of time.

These three instances have been given to show that individual Africans were capable a hundred years ago of absorbing Western school knowledge, of being successful economic *entrepreneurs*, and of holding their own in diplomatic exchanges with European powers.

The question arises: Why has this achievement of individuals not been matched by a similarly quick and thorough assimilation of native peoples as a whole? Such an assimilation would have been a

worthy object of education, if the term may be used in the wide sense of social transformation.

The first obstacle was the nature of the geographical environment. It was hostile to communications to a degree which cannot be fully realized in our days of wireless and aeroplane.

Secondly, the economic backwardness of the country, prior to the discovery of diamonds and gold, made of South Africa a huge arsenal of poverty which had to be overcome before public attention could turn to education.

The third obstacle arose from objections of vested white interests to the full absorption of the African into the white community. Complete participation of the black man in the white economy, the granting of unrestricted political rights to him, has never been practical politics in South Africa.

These reasons have found ready attention in analyses of the South African scene. A fourth obstacle is frequently overlooked by educationists in accounting for the backwardness of its indigenous population. This obstacle consists in the resistance of African society against the forces of transformation. In this paper I wish to advance the hypothesis that this resistance developed round certain centres of indigenous authority. The too-ready use of such abstract concepts as 'the rigidity of custom', 'the dead weight of tradition', and 'the inveterate conservatism of the native' is to be avoided. We must try to pinpoint the social forces that are active in the maintenance of old customs and capable of supplying socially acceptable and valid motives for opposition to the moulding influences from outside.

Initial Resistance

In such an analysis of the forces of resistance, it is possible to distinguish between initial resistance, which arose immediately when contact between white and black was established, and emergent resistance, which resulted as a reaction to the growth of white supremacy in South Africa and the special characteristics it developed.

In indigenous African society children are under the tutelage of the family head until marriage. A daughter returns to the father's tutelage if she is divorced. A son passes out of it only with the establishment of his own homestead, which normally does not take place till after his father's death. The father not only controls the behaviour of his children; he exercises a supervisory right over their private property. By means of certain religious sanctions he ensures co-operation and harmony in the family circle even after his own death.

In the initial contact situation, attempts by missionaries to draw children into their schools, and equally so efforts of government officials to apprentice native children to farmers, aroused the sus-

picions of the parents. They feared the exploitation of their children. They demanded payment for the work done for the white man by his pupils. In the early days the mission station and the magistrate's office became sanctuaries for dissentient individuals. Girls who refused to be married to the men of their fathers' choice, and sons who set themselves up in opposition to their fathers, fled to the white man.

Early missionary objections to the bride price dwelt on the commercial aspect of the custom. Against this interpretation the African parent stressed two moral implications of the transaction: the bride price is a compensation for the proper upbringing of the girl and a pledge for the proper conduct of the marriage partners.

The denunciation of initiation as a 'satanic institution' further revealed the one-sidedness of European evaluation of customary institutions. The mistake was understandable in view of objectionable features of the rites. But it was incomprehensible to the African elders, to whom the function of initiation is to inculcate group loyalty and to impress the ethical code. The missionaries' opposition to initiation unintentionally cut at the very root of tribal morality: respect for the family heads and elders. To a person who realizes that the modern world has not supplied to African life an adequate substitute for such loyalty training in local circles, it is not surprising to find that near one of the oldest Christian educational centres—founded over a hundred years ago—numerous initiation camps are held regularly every year.

Resistance of the Kinship Group

These initial misunderstandings might perhaps have been removed. But further occasions for resistance from the paternal centre of authority arose as the white man began to establish a school system to spread his knowledge and his norms of morality. First, the parents found that what was taught in these institutions bore no relation to life as they knew it. Moreover, the children who went through the schools boasted about their allegedly superior knowledge, which so patently was inapplicable in the native environment. They often ridiculed their illiterate parents and expressed contempt for the old tribal ways. The respect for the older generation upon which social cohesion is based in all societies was dissipated by the school.

The establishment of industries, the growth of cities to house the labour force, and the urbanization of an increasing proportion of the African population brought further troubles. The men are drawn away from the rural reserves. African society there becomes depleted of its menfolk. Families in the reserves consist of harried mothers, disobedient children, and impotent greyheads. The breakdown of filial discipline, the increasing violation of the marriage bond by the abandoned wives, signalizes a serious moral decline. In the urban

areas prostitution and temporary unions undermine family sentiment and the morality of the men.

Life in crowded slum locations aggravates the dissensions between parents and children. While father and mother work as factory hands and domestic servants to eke out a bare living, the children, being left alone, become a prey to the vices of the great city. Illegitimacy assumes large proportions. Juvenile gangsterism makes African youths acquainted with violent crime.

The worst fears of the African parents have come true. The intervention of the white man on behalf of wayward sons and daughters on the plea of individual freedom has led to the flouting of parental authority in general and to a serious and at times irreconcilable conflict between old and young in African society.

Tribal Resistance

A second most powerful centre of resistance against the white man's way of life has been the chief. After the first contacts, in which African potentates were treated with the polite forms of European diplomacy, their interference with what were considered the legitimate interests of the colonists led to increasing differences. The treaty policy was replaced by a period of unfriendly co-existence. The establishment of colonial governments and of areas of considerable personal freedom in the economic and political sense produced the refugee. He escaped in great numbers from the tribal territories, was a welcome accession to the labour force of the colony, but viewed as a traitor and deserter by the tribe. By frequently decamping with the cattle in his charge, which according to African law were the property of the ruler, he became political offender and criminal at the same time. In this way the setting up of a white colony unintentionally undermined the moral basis of tribal life.

In course of time co-existence proved impossible and the military subjugation and territorial incorporation of chieftainships became a necessity from the white man's point of view. This in turn brought the European face to face with witch-finding, the African legal process which discovers witches and sorcerers and eliminates social misfits and overweening individuals. The white governments stopped this practice. But in saving certain individuals from a cruel and, in our view, undeserved death, they disturbed the balance of African corporate life and weakened the methods by which its rulers had controlled it in the past.

Here practical schemes to overcome the conflicts of the initial situation between the white power system and the black power system were worked out. For instance, Shepstone's segregation policy leaned heavily on the traditional political authorities for support. But gradually the composition of African society became greatly altered. New forces emerge at the side of the tribal

machinery of chief, council, and men's assembly. These new forces advance claims to leadership.

Western schooling produces an educated class. It has new wants and novel notions about the best representation of African interests and their advancement. Unimpeded by the ancient check of witch-hunting, its members create for themselves positions of prestige and economic wealth which throw into the shade the cumbersome tribal system.

Besides, all over South Africa religious sects make their appearance, some breaking away from established mission churches, others arising like mushrooms from the decaying substratum of pagan culture. In either form the African sects offer opportunities for leadership to both the genuine believer and the ambitious charlatan who are deprived of outlets for their gifts in the political and economic spheres.

Where large accumulations of industrial labourers have grown up a third type of leader emerges: the trade unionist. He may at first glance be less influential than chief, teacher, and priest. But his control over his followers is usually more effectively organized, and through strikes and wage disputes is more directly felt in white circles.

If the family head explains the disintegration of his moral authority as the result of the preaching of individualism by his white opponents, so the chief, struggling with his allies for the survival of traditional leadership, sees in Western education the origin of the dissentient groups within his tribe. When, some time ago, the author discussed the traditional moral code with an old member of the royal family in Zululand, he once burst out in grief and anger: "Why do you wish to know our good customs of respectful behaviour, when in your schools you destroy them?"

Magical Authority

A third centre of resistance is the African magician. He is represented in at least four forms. The medicine-man or herbalist uses more or less rational methods in combating diseases. He adapts himself easily to the competition from Western trained doctors by declaring certain diseases to be African in nature and to lie outside the competence of the white man. The success magician ensures his client against misfortune of every kind; he produces rain, keeps storm and hail away, secures fertility, and enhances political power. The practitioner of evil magic uses *materia magica* to destroy his enemies. (If this involves the illegitimate use of magical substances harmless in themselves, anthropologists speak of sorcery. If the destructive influence of a person is an automatic consequence of a special psychic quality which works without magical rites, we are dealing with witchcraft.) The specialist, who in a legally approved manner discovers the 'black' magician, is the witch-finder. As

diviner he acts in the discovery of other hidden matters: stolen goods, lost property, and the diagnosis—but not the treatment—of disease.

The initial conflict between white and black with respect to magic turned on the position of the witch-finder. (In the European view, sorcerers and witches either do not exist at all or can do no harm.) The persons 'smelt out' by this expert were summarily executed in tribal days. As no public evidence was taken, no witnesses called, no accusations framed, and no defence allowed, Europeans regarded this process as a travesty of justice. The witch-doctor's profession was declared illegal.

A number of conflicts emerged from this suppression of overt African magic. Since the check on the activities of witches and sorcerers had been removed, witchcraft and sorcery could now flourish with impunity. The conflict between the generations, the dissensions within the tribe are, in the view of many Africans, the result of the unhampered indulgence in evil magical practices which now began. In the settled order of the past both would have been impossible. Furthermore, the suppression of 'legal' methods of dealing with black magic leads to the increase of private vengeance-magic by way of retaliation as a quite inevitable reaction.

Again, the rapid building up of white political and economic power reduces the chiefs to impotency. Administrative unification and centralization, the emergence of a class of black officials, make it possible to dispense with the services of a number of minor chiefs. To retain their traditional position certain chiefs, with the help of magicians, resort to ritual murder, a particular form of success magic. An African ex-student of a South African university was recently hanged for such a crime. In the social *milieu* of his tribe, and without adequate alternative methods of remedying the threat to his position, the scientific notions he had acquired for his examinations were of little use to him in the solution of the power conflict.

The contact situation has led in other ways to an increase in magical practices. The juxtaposition of the wealth and force of Western civilization and the poverty and weakness of Africans subject the latter to severe temptations, the more so as rational means to acquire it hold little hope of success. In such a situation certain individuals respond with a combination of crime and magic. A few years ago a white storekeeper was shot and robbed of a large sum of money. The murderer was a teacher who had been trained in one of the larger Christian institutions. He had bought at heavy expense from a magician a 'drug' to remain invisible during the deed and to keep his haul safe from the police.

The occupation of underground mineworkers, with its risks to life and limb, induces many recruits of the gold mines to visit a magician, who releases them by 'drugs' from the worrying doubt: Shall I return or not return? With the increased chances and risks of

modern life, opportunities to apply the ancient power and luck magic increase likewise.

The resistance of the kinship, tribal, and magical centres of authority in the initial contact situation was due to the fear of being superseded and discarded. In the emergent conflicts, resistance arose because of the social cleavages and tensions to which African society under the impact of Western culture is increasingly subjected. There is no doubt that this resistance is a powerful contributory factor to the incompleteness of the transformation of African society. Only if and when the causes for resistance have been effectively tackled can the process of social remaking be completed. Then, and only then, can education in the narrow sense of schooling be successful and satisfying. Wise planners of educational policy will see the tragic character of the situation. Both reformers and resisters obtain strength and justification for their actions from moral universes. These are, alas, disparate in nature and orientation.

O. F. Raum.

CHAPTER FOURTEEN

COPPERBELT IN THE BELGIAN CONGO

EDUCATION in the Belgian Congo is in the hands of religious missions, but the government helps all schools which conform to an educational code last revised in 1948. There are about one million children at school in a colony of twelve million people, and they probably represent 50 per cent. of all the children of school age. The Copperbelt, in the south-eastern part of the Belgian Congo, occupies the larger part of the three *territories* (roughly similar to the districts of British Africa) of Elisabethville, Jadotville, and Kolwezi, as they existed in 1951, data for the whole area being as follows [1]:

Total African population	309,500
Detribalized	231,500
Total detribalized, men	84,000
Number of detribalized women to 1,000 men	680
Number of detribalized children to 1,000 women .	1,560

N.B.—*Tribalized population: all outside tribal jurisdiction.*

The Copperbelt so described covers an area of 35,000 square miles, roughly equivalent to that of Portugal, but two-thirds of its total population, and four-fifths of its detribalized majority, are concentrated around the administrative and mining headquarters of Elisabethville (101,000 African residents), Jadotville (49,000), Kolwezi (24,000), and their satellite towns.

Such are the new and artificial conditions in which the native labourer, almost always a stranger to the region, is adjusting to the requirements of social life. The figures show that the number of women is insufficient for the basic step of marriage. The actual situation is even worse. At Elisabethville, M. Grévisse, the *Commissaire de District* (Chief Commissioner), verified that 25 per cent. of the women remained unmarried, and that 55 per cent. of a sample of schoolboys were not living with their own parents.[2]

The labour market is dominated by *L'Union Minière du Haut*

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[1] Compiled from: Chambre des Representants, *Rapport sur l'Administration de la Colonie du Congo Belge pendant l'année 1951* (Brussels, 1952). Abstracts published every year in December in *Zaïre*, the Belgian African monthly, Brussels.

[2] F. Grévisse, *Le Centre Extra-Coutumier d'Elisabethville* (Brussels, 1951).

Katanga, a private corporation which, in 1951, made a profit of 5,000 million francs, more than one-half of the government's own 8,000 million. Its workers and their families live in compounds, on which the following information was published.[3]

	1929	*1942*	*1951*
Workers . .	16,510	16,047	16,972
Number of women to 1,000 men	260	585	795
Number of children to 1,000 women	410	1,190	1,835

It is clear that life on the compounds has improved in recent years to a remarkable extent, and that conditions there to-day are better, albeit not as much as might be expected, than among Africans left on their own.

Schools

With regard to education, government-aided schools in early 1953 included [4]:

	Catholic Boys	*Catholic Girls*	*Protestant*	*Totals*
Preparatory	650	727	172	1,549
Primary I	9,296	4,319	1,043	14,658
Primary II	3,336	707	1,069	5,112
Others	496	223	133	852
Totals	13,778	5,976	2,417	22,171

In addition, *L'Union Minière* maintains schools served by Catholic missionaries catering for about 10,000 children in its compounds. Details are available only for 1951, when 9,000 out of 12,000 children of school age actually attended these schools; 4,800 of them boys, and 4,200 girls. Post-primary education was provided for about 600 of the boys, and included a teacher training school at Ruwe, with 170 pupils.[5]

On the basis of the 1951 figure of 90,000 children, and assuming that one-half of them are of school age, it would appear that school attendance in the Copperbelt approaches the figure of two-thirds. *L'Union Minière* actually claims a 100 per cent. rate, on the ground that some workers send their children to outside schools. In Elisabethville, *Commissaire de District* Grévisse found the schools attended by about two-thirds of the boys from the native location, one-third of the girls, and one-third of all African children of school age living in the European-run township.

[3] H. Robiliart, in "The Belgian Congo", special issue of *Les Études Américaines* (Cahier XXXVIII, Paris, 1953, pp. 15–17).

[4] Compiled from information kindly supplied by Monsieur Grévisse.

[5] Anon., "L'Enseignement professionnel à l'Union Minière du Haut Katanga", *Grands Lacs* (Namur, Belgium, November 1952, pp. 26–7).

The language question is a serious one. The Belgian policy favours native languages, but detribalized children for the time being want French at all costs, so that this European language is taught from the first year. Late in 1953, *L'Union Minière* opened at Ruwe a centre for educational research, aiming at the adjustment of the European curriculum to local conditions, but it is not certain that African opinion will accept all the suggested changes. It is known that arithmetic is the most difficult subject, and should accordingly be given first consideration.

Education is not compulsory. The full primary curriculum is divided into three grades, first (two years), second (four years), and 'selected'. It is available only at four places; two of them urban, Elisabethville and Jadotville. The majority of children stay in the first grade, access to which is not too easy, in spite of the use of Swahili and other native languages. After primary school, the boys may take their choice between technical (one school, two urban workshops at Elisabethville and Kolwezi, two rural workshops) and non-classical secondary education. The latter is provided for about 350 pupils at Elisabethville and Jadotville. Girls are restricted to courses in household duties, available at four places, two of them, Elisabethville and Jadotville, being urban. But some secondary education is also provided in the former town at *École moyenne ménagère*.

There is an acute shortage of accommodation in towns, with no relief in sight. The government meets 70 per cent. of the building costs, but even so, missions are unable to afford the expense of urban building. As 4,000 children are born yearly to 40,000 inhabitants in the Elisabethville location, overcrowding is fast assuming tragic proportions, with at least one case recorded of more than 300 boys in a single class. The children suffer through having to walk long distances to school, something which, in the case of girls, meets with strong objections from parents. Altogether, the Copperbelt has 47 government-aided schools (7 Protestant) located at five urban and ten rural places.

The staff also is in short supply, native helps (*moniteurs*) being trained at only two places for boys (one Protestant) and one for girls, although some additional staff is recruited from three schools for boys in the vicinity of the area. In 1949 the main school at Elisabethville had 6 European teachers and 34 African helps for 2,900 boys.

Technical Schools

The only government-aided technical school in the Copperbelt is located at Kafubu, near Elisabethville.[6] Attendance at the four-year

[6] R. S., " L'École professionnelle de la Kafubu ", *Grands Lacs*, November 1952, pp. 19–21.

course is restricted to boys with their leaving certificate. Most of the teaching is given in Kibemba, the local language, in which all text-books in use are printed. A great problem of the school, as well as of all schools in the Belgian Congo urban areas, is that of preventing European employers from luring the pupils into work before completion of the curriculum, but the Kafubu graduates have won a high reputation for integrity as well as for skill. Some of them are living in tribal areas, where they earn their living from the increasing popularity of European furniture and dress.

L'Union Minière maintains an elaborate system of technical education for boys over 14 years of age. Those who failed at the School Certificate Examination are apprenticed for two years. The others, if not going into some other type of education (the corporation claims no right to their services), take a four-year pre-vocational course, with subjects selected according to their taste and capacities. Two schools for skilled workmen were opened in September 1953. One of them for the time being consists of white children exclusively, but African pupils who do well in the other school have already been promised access to this one, which will qualify them for foremanship and other responsible positions.[7]

The lag in female education was long held to be due to native prejudice, but African girls to-day are so eager for school education that the demand largely exceeds what is offered. For the next generation, great hopes rest on a school opened at Luishia in 1950. Eighty girls registered there for the year 1951–2, and it is planned to increase the capacity of the school to 500, as soon as possible. The girls are kept in residence because it is felt that the westernization process requires all-day control of their activities, but they eat native food, wear African dresses on Sunday, receive frequent visits from their parents, and go back home three times in the year. The teaching is in French, but the use of Swahili, the most popular language on the Copperbelt, is encouraged outside the classroom.[8]

Adult Education

Adult education and social welfare are not neglected. Social workers are active mainly with women, 1,200 of whom attend classes provided by *L'Union Minière* in sewing and child- and household-care. This corporation also maintains evening classes for men, and a special course for truck drivers, open to deserving workers over 35. Special attention is devoted to kindergartens catering for 3,500 children between 3 and 6, in the hope of making later school work easier. Everything included, the educational and social-welfare services of the company cost 42·3 million *francs*[9] in buildings and

[7] Correspondence with *L'Union Minière.*

[8] Anon., "A Luishia (Katanga), Institut Sainte Marguerite", *Grands Lacs*, October 1952, pp. 33–5.

[9] Approximately: 100 *B. Congo francs* = $2 = 14*s*. 4*d*.

equipment, and 131 million in current expenditure, from 1947 to 1952.[10]

The government sponsors *L'Étoile-Nyota,* a native French periodical, and it runs public radio broadcasts and cinema shows, while missionaries help in maintaining adult classes for men (260 pupils), African clubs, and sporting organizations. However, the native population takes little active interest in all this. Even the trade unions, nine in number, with 1,185 members in 1951, survive only thanks to the backing of the Christian Trade Union Organization, from Belgium. Local government, which was granted to the Elisabethville location in 1932, collapsed in 1943.[11] Native interest as a rule seems to centre on material problems. On the other hand, there is little open expression of unrest, with only one flare-up registered, when in 1942 a European strike was followed by native riots which were quashed with the loss of lives.[12]

The Belgian government for the time being concentrates on the creation of a native middle class; developing free of colour-bar restrictions. This, provided the privileged do not keep themselves apart from the masses through language and other barriers, will help in solving the fundamental problem of the Belgian Congo. The problem is not so much the raising of national income but the bridging of the gap in income between the two races. In 1951, 17,860 million *francs* from the national income went to Africans, and 18,490 to 59,157 non-Africans.[13] This amounts to an average per head of 1,560 *francs* for the former, and of more than 312,000 for the latter.

In the general picture of Belgian Congo educational developments, the Copperbelt specializes in technical advancement. Although a handful of young men at Elisabethville receive some private courses at the post-secondary level, the area knows little of the achievements which, in other parts of the colony, made possible such institutions as Lovanium University College, near Leopoldville.[14] Considering the importance of the Catholic church, it is striking to find that the Copperbelt has none of the 350 native priests who have already been ordained in Belgian Africa.

J. L. L. COMHAIRE.

[10] Correspondence with *L'Union Minière.*

[11] J. Comhaire, *Aspects of Urban Administration in Tropical and Southern Africa* (Cape Town, 1953).

[12] J. Comhaire, " Some African Problems of To-day," *Human Organization* (New York, Summer 1951), pp. 15–18.

[13] Governor-General's Address to the Government Council, July 1953.

[14] Cf. Introduction to *Food and Leisure among the African Youth of Leopoldville,* by S. Comhaire-Sylvain (Cape Town, 1950).

CHAPTER FIFTEEN

JAPAN IN THE MEIJI RESTORATION

THE modernization of Japan occasioned great interest and lively discussion for the greater part of the first quarter of the twentieth century, not alone for what it achieved but also for the impact it has had on the rest of Asia as well as on the West. To-day, with Asia the cynosure of the world and providing the West with major problems and challenges, what took place in Japan shortly after the Meiji Restoration has come to assume a new significance, particularly from the point of cultural adjustments which must take place in all the countries of Asia.

More than thirty years ago in *The Problem of China,* Bertrand Russell wrote as follows of his impression of Japan which he had just visited: "The modern Japanese nation is unique, not only in this age, but in the history of the world. It combines elements which most Europeans would have supposed totally incompatible, and it has realized an original plan to a degree hardly known in human affairs. The Japan which now exists is almost exactly that which was intended by the leaders of the Restoration."

Wonderment at Japan's amazing transformation since 1868 has been expressed time and again by Western philosophers and historians. In *A Short History of the British Commonwealth* (Volume II, page 617), Ramsay Muir wrote: "There is nothing in human history more astounding than the swiftness and success with which, in the course of a very few years, Japan discarded the forms of an ancient and admirable civilization under which she had lived contentedly for many centuries and by an extraordinary effort of the national will adopted, and adapted to her own needs, a totally different system."

This unprecedented transformation in modern history involved the telescoping into decades the industrial revolution instead of a century which Europe required in its natural development. As a matter of fact it was no miracle that was accomplished. Given the nation's historical background it was rather a natural consequence which was to be expected. There was already an exceedingly favourable condition which pre-existed the Meiji Restoration by several centuries, namely, the cultural habit of being prepared to look to the outside and borrowing and assimilating whatever elements of alien cultures which were doomed desirable and could be used to advantage.

The Impact of the West

When the Japanese nation felt the full impact of the West and opened its doors to normal intercourse it was bowing to the inevitable. But the leaders were determined and confident that the course of national development could and should be carefully charted. It was obvious that feudalism had to go if a strong, new Japan was to emerge. Thus, feudalism was brought gently to an end in 1868 without any bloodshed, and political authority was peacefully restored by the Shogunate to the Emperor Meiji. However, even before this was accomplished an educational campaign was under way to make the people as well as the leaders see the urgent need of abandoning old customs and attitudes in favour of new ones such as those in the West.

No one was more effective in this work of developing a new attitude than Fukuzawa Yukichi, the founder of Keio University. In 1865 he introduced the study of English. After visiting the United States on three separate occasions, and also Europe, he became the best-informed person of his day on conditions in the countries of the West. He was convinced that the way to Japan's progress lay in following the example of Western nations. His work, *Conditions in the West,* published in 1869, created a sensation and became a best-seller. The profound influence this book had on the policy-makers and individuals of the day is difficult to fathom. There was no doubt in Fukuzawa's mind that the English system of parliamentary government was the best in the world. No wonder, then, that Count Okuma, who was intimate with him and who founded the Reform Progressive Party in 1882, advocated a parliamentary government of the English type.

Fukuzawa carried on indefatigably the work of educating and enlightening the public to the responsibilities of the new age. He played a vital and unique role in the process of liquidating the vestiges of feudal Japan and particularly the abandoning of the old customs, manners, morality, and the old concepts of politics and economics. He successfully employed his facile pen in arousing the spirit of enterprise in business by overcoming the traditional prejudice and contempt manifested towards merchants and money-lenders. He saw the profit motive as a necessary incentive in economic activity. His best-known work, *The Encouragement of Learning,* sold upwards of seven hundred thousand copies and is said to have caused the price of paper to skyrocket in the capital. Fukuzawa also developed a simple style of language which was far better suited for propagating his ideas. In his multiple role of critic, journalist, publicist, educator, feminist, and philosopher, the versatile leader contributed immeasurably to the modernisation of Japan.

Western ideas were disseminated with great vigour through the

eighteen-seventies and eighteen-eighties. Efforts were made to inculcate the spirit of independence and initiative and enterprise. Translations were made of Samuel Smiles' *Self Help* and *Character* as a means of encouraging the development of a new spirit. The Charter Oath of Five Articles which the young Emperor Meiji promulgated in the spring of 1868 represented the result of the careful thinking and planning of the leading statesmen of the day. It was the conceptual blueprint for the modernization of the nation which had just emerged from nearly seven centuries of feudalism and two centuries of isolation. The ultimate goal of modernization, as conceived by the leaders, was " to establish firmly the foundations of the Empire ". For this purpose, deliberative assemblies were to be established, national unity achieved in the management of the affairs of the state, class system abolished, equality of opportunity established, obsolete customs and practices abandoned, and wisdom and knowledge sought all over the world. While the document gives the impression that its drafters were interested only in the political and social aspects of modernization and there is no mention of technological matters, their concern was primarily the importation of Western techniques and know-how rather than ideas and ideals.

It was clearly perceived by the leaders in 1868 that the survival and independence of the nation were at stake. The choice lay between being engulfed completely by the raging tide of nationalism and imperialism from the West or riding on its crest into the future. Needless to say, they chose the latter course. Speed was of the essence if the nation were to cope successfully with the difficult problems brought on by the steadily increasing pressure from the West.

In the programme of modernization it was imperative that a simultaneous attack be carried out on all sorts of problems without any loss of time. Re-organization and centralization of the government were given the highest priority in the implementation of the blueprint of modernization. Leaders were needed along with the general increase in the level of education of the people to make it possible for everyone to participate effectively. A strong military organization to ensure national security was an absolute and immediate necessity. But all these, as indispensable as they were to the programme, were not enough. Technological progress was an urgent necessity. Western techniques or methods of production, finance, marketing, transportation, and communication had to be learned, mastered, and applied. In addition, certain changes were necessary.

Economic and social ideas, attitudes, and practices required adjustment and modification to accommodate the new technology. However, these changes were deliberately restricted to the absolute minimum. Naturally no attempt was made to change the traditional social structure or the way of life. If such changes occurred

they were certainly not by conscious design but merely as a by-product which was perhaps not even anticipated or foreseen.

Upon the transfer of political authority by the Shogunate to Emperor Meiji in 1868, the capital was removed from Kyoto to Tokyo. This represented a sharp break from the past, for Kyoto had been the nation's capital for over ten centuries, since the year A.D 794. Simultaneously a new centralized government was set up, but from the very outset it was faced with a grave financial problem. It was confronted by an empty coffer which had to be filled if the new government was to function. The first task, therefore, was to build up its treasury. A tax system which would yield the necessary revenues had to be instituted. In 1869, the second year of the Meiji era, the government established a mint in Osaka even before the tax structure was set up definitely.

Although the feudal regime came to an end in 1868, the feudal system of administration by fiefs continued until it was abolished in 1871. In that year fiefs were superseded by prefectures, and governors were appointed by the central government to administer them. At the same time, the feudal system of land ownership was abolished and land tax was made payable in money rather than in kind. Farm lands were made saleable and transferable.

Compulsory Education and Military Conscription

Important changes which were deemed necessary were instituted in the social structure and life of the people. The liquidation of the rigid class system based on occupation which existed during the last two and a half centuries and more of feudalism was achieved in 1869, enabling individuals to go into any calling or profession for which they were best suited. Freedom in the choice of occupation was now ensured, although equality of opportunity was not immediately realized. To make it possible for individuals to realize their greatest usefulness in the building of a strong modern nation, a compulsory education system was introduced for the first time in 1872. In the same year the ban on Christianity, which had been in effect for more than two centuries, was lifted. The new educational system was geared to turning out useful citizens and to the training of skilled workers in industry as well as the professions, science, and technology. One of the most difficult problems faced by the government was the rehabilitation of the *samurai* class. A large number of *samurai* had to be given training so that they could be placed in gainful occupations to assume their positions as useful citizens in a new age.

Side by side with the compulsory education system was set up in 1873 a military conscription system which represented another definite break with the feudal past. This was a radical departure from the all-*samurai* feudal military organization, and the former professional *samurai* refused to believe at first that anybody but they

could fight. They looked down upon the commoners as incapable of being trained as effective fighting men since they were not made of the stuff that fighting required. But in 1877, in the Satsuma Rebellion, the new conscript army, made up of the sons of merchants and farmers, acquitted itself in a splendid manner and proved beyond doubt that the commoners were every bit as good as the sons of *samurai.*

Old Customs and New Techniques

On January 1st, 1873, the government officially adopted the Gregorian calendar, a change which enabled the nation to break away from the Chinese lunar calendar that had been in use for twelve centuries and to synchronize with the West. Although dates came to be reckoned in business and government in Western manner, the people, especially in the rural areas, did not discard the lunar calendar altogether. What actually happened was the simultaneous use of both calendars by most people, resulting in the kind of dualism which is reflected in various aspects of Japanese life to-day.

Needless to say, many old customs had to be abandoned, necessitating in some instances the use of coercion. The decree ordering people to adopt Western-style haircut is a good example of how even a simple habit or custom dies hard and cannot be so easily legislated out of existence. Even with coercion it took a while to achieve 100 per cent. compliance. In 1871, the government decreed that the people adopt Western-style haircut since the feudal topknot did not sit well with modern headgear, especially in the army. Because of the reluctance or hesitation shown by the populace, Emperor Meiji personally set an example in 1873 by adopting the Western haircut. However, even with the Emperor leading the way, it was not until 1889, the year the Constitution was promulgated, that the government was satisfied that virtually all the people had complied with the new haircut decree.

Technology received perhaps more than its share of attention, since the leaders were convinced of Japan's backwardness when compared with the advanced nations of the West. It was with a view to accelerating the importation of Western science, technology, and know-how that the Japanese turned to the United States and the countries of Europe for assistance. In 1870 the first telegraph line in the country was completed between Tokyo and Yokohama, and five years later a nation-wide network was in operation. In 1872 the first railway line was opened between Tokyo and Yokohama with the help of English engineers. American advisers were invited over to assist in the agricultural, mining, and industrial development of the northernmost island of Hokkaido. Educational advisers, university professors, legal advisers for the Foreign Office were among the American and English experts who were invited by the Japanese to assist in the modernization of the country. Westernization gained

momentum in the eighteen-seventies. The Iwakura Mission to Europe and America, 1871–3, was in fact a mission to study the various aspects of Western technology although it was ostensibly and avowedly a mission to negotiate treaty revision with the powers.

The government at the very outset became deeply involved in the study of the economic systems of the West as a preliminary to the adoption of industrial and business organization, production techniques, financial institutions, and management practices of the West. Quite understandably the leaders were unwilling to discard everything that was traditional or indigenous; they were anxious to keep the desirable features and combine and harmonize them with the best that the West had to offer. As a means of encouraging the development of new economic activities, the government took the initiative in establishing a banking system, trading firms, and model factories as well as shipyards, agricultural experiment stations, and technical training schools. It was one of the members of the Iwakura Mission, Okubo Toshimichi, who was the moving spirit of the industrialization programme. No other person contributed as much to the technological modernization of the nation. Without his foresight and strong sense of dedication and leadership, the speed with which industrialization was carried out could not have been achieved.

Social and Cultural Changes

Many of the nation's leaders became enamoured with Western civilization just as their ancestors had with Chinese civilization, back in the seventh and eighth centuries. In the mid-1880s, the Westernization craze reached its peak and high officials of the government took to "tripping the light fantastic" at the Rokumeikan, an elaborate social hall built by the government to stage gala parties. Costume balls and masquerade parties were held periodically, and high Japanese society, with the help of foreign diplomatic representatives and residents, tried hard to become Westernized. The first cabinet, formed in 1885 with Prince Ito Hirobumi as Prime Minister and Marquis Inoue Kaoru as Foreign Minister, was dubbed by contemporaries as the 'Dancing Cabinet' for their sponsorship of social affairs through which they hoped the leaders would acquire social grace in the Occidental manner.

It became the fad for fashionable young ladies from the upper class to learn to dance. For a time social dancing was made a requirement in the girls' high schools. The fad, however, did not last very long. At one point, some of the nation's leaders were seriously considering the possibility of adopting English as the national language. There were some who seriously advocated planned miscegenation to improve Japanese physique through the introduction of the Caucasian strain. Both of these came to naught, thanks to the advice given against them by an American linguist and an English

sociologist respectively. However, they demonstrated to what extremes the desire for modernization and improvement can be pushed, especially in the thinking and planning stage. Excesses in modernization aroused the ire of the conservatives and before long reaction set in, the promulgation of the Constitution in 1889 and the establishment of the Diet in 1890 providing the turning-point.

Social and cultural changes which were introduced were by and large intended not radically to change social structures or national life, but rather to remove serious obstacles which stood in the way of progress. They were modifications in, rather than the complete rejection of, the traditional ideas or values. More often than not they involved material changes like the new haircut, Western dress, Western inventions like the electric light, the telegraph, and the locomotive, rather than changes in the basic social customs, ethics, or etiquette, or the way of life. Little, if any, non-material or spiritual transformation took place, for not only was it not intended but was assiduously avoided. The entire educational system, for instance, was built upon Confucianist-Shintoist philosophy and ethics as reflected in the Imperial Rescript on Education and reinforced by German educational philosophy.

Adjustment of cultural patterns to the new technology was in reality not as Herculean a task as may easily be supposed. It was the achievement of the art of the possible. Conditions were favourable, for there was political unity and social solidarity and predicated upon strong national pride, if not nationalism, intense patriotism. Desire for national survival and independence, equality, and prosperity needed no further stimulation. Above all, the nation had an energetic, industrious, practical, law-abiding, and extremely willing population with as capable a leadership as could be obtained for the task it set out to do of building up a strong nation.

Furthermore, the psychological and cultural propensity for new technology had already been developed to a very high degree. Borrowing and assimilating alien culture had become a national habit to the Japanese people. They had become eager borrowers and improvers of culture. Fortunate for the nation also was the fact that in the course of historical development, no segment of the population had developed any socio-cultural attitude of condescension towards or contempt for physical exertion. Manual work as such was never looked down upon as unworthy as, for example, the Chinese scholar class or the Hindu caste system had done. In the seventeenth- and eighteenth-century Japan, the scholars had developed great interest and considerable skill in science and medicine, chiefly through the use of the Dutch language. Thus, by the nineteenth century, when the new technology was introduced, the Japanese were psychologically more than adequately prepared for it; consequently, they received it with great enthusiasm.

CHITOSHI YANAGA.

SECTION III

PLANNING AND EDUCATION

Two major social patterns were introduced by the Industrial Revolution as the basis of modern Western Civilization. The first was the application of non-human sources of power to repetitive manufacturing processes; resulting in enormously increased production. The second was the development of immensely increased markets for the consumption of these goods. Whilst modern mass production is a miracle of precision and brilliantly successful planning, the parallel planning of consumption, involving far-reaching social change and control, has been considerably less successful. There has been no lack of effort, however, in the field of social planning; in industry, in commerce and in military affairs; and at the national, regional, and municipal levels. Inevitably there has also been educational planning, which has tended to be of two types. Either it has been essentially philosophical, aimed at producing great cultural changes or assuring some social goal; or it has been operational in nature, with the more limited end of producing a high degree of efficiency at some practical level of the school system. The latter—somewhat analogous to production planning in industry—has been easier and more successful. For example, population shifts have been predicted and new school buildings correctly located to serve future needs. Textbooks meeting the various kinds of classroom situation have been produced; tax systems, standardized psychological tests, classroom methods improved, and so on. These are worthy educational achievements, but standing alone they are relatively meaningless. Only when tied together by a broad and encompassing educational philosophy do they have real value. Thus, whilst the details and efficiency of the Nazi and pre-war Japanese educational planning were in many ways first rate, few educators to-day would defend these two systems. For their basic educational philosophy was outrageous and unacceptable to a free world.

Educational planning, as a specialized field of social planning, has demonstrated three notable characteristics. It is dedicated to increased efficiency. It is enormously complex. And it is fundamentally artistic and creative.

Educational efficiency is much abused. Generations of administrators have measured their success in terms of per-pupil cost of instruction, the maintenance of school plant, the pupil-teacher ratio for instruction, the percentage of illiterates in adult society and the number of successes recorded in achievement examinations. These

and similar indices are, however, only evidence of the internal efficiency. If the system is directed towards a social undesirable end, then operational efficiency may be evidence of failure rather than success. When applied to technological development this ambivalence in the concept of educational efficiency frequently produces tragic or ludicrous results. For example, there has long been widespread belief that informed people are better people; literate people are informed; therefore anti-illiteracy campaigns lead to better people. But literacy is a technical skill, nothing more. It provides a line of communication between information sources and the masses of the people. If those people are in a position to judge and have a social tradition which reinforces choices considered good, and rejects others, then literacy may well be an educational asset. Without these pre-requisites it may lead to more abject slavery and political manipulation rather than freedom.

The second characteristic of educational planning is its enormous complexity. At the operational level the results are limited; the possibilities of great success or far-reaching failure are not great. When planning is philosophic, its results are extremely complex and of fundamental importance. Whether an educational system shall be designed to produce an *élite* or to reach the masses is a matter of the greatest importance: so is whether a subject shall be trained to fit a pre-determined role in an authoritarian society or as a citizen to make a free choice in a democratic society. The educational instruments may be superficially the same, yet their aims differ radically.

The complexity of the planning process is grossly under-estimated by the educational leaders of many under-developed countries. To select 'what is best' from the West is difficult; to apply it to their own cultures, using Western educational methods, equally so. Cultures are made up of complicated interacting and historically conditioned factors. One part cannot be selected and applied by itself; other parts are acquired which, the recipients may judge, are *not* what is best. Finally, a 'standard' educational practice successfully producing in its own culture desirable social goals may not work in another cultural setting. An opposite or unpredictable result might be produced.

Finally, educational planning is fundamentally artistic. It is not, except in a limited degree, scientific. That is to say, no test can be applied which will infallibly indicate the proper educational specific for a corporate society. For there is no common social goal, and there can be no unchallengeable educational process. Educational planning is, therefore, an art, in that it consists of weaving together a number of educational strands in any one of a number of possible combinations and patterns to achieve a desired social objective. Its success depends upon wide experience and the blending of successful experiments in similar situations. But the choice of models to use, the blending of them into harmonious wholes, the successful

prediction of the side effects and the elimination of unnecessary social shocks and frictions—all these constitute creativity of the highest order.

Sir John Sargent had brought to the problem a life-time of experience. His knowledge of education in the Asiatic Dominions of the British Commonwealth is vast. Perhaps his most notable contribution was that of heading the commission which produced for India the plan bearing his name—the *Sargent Plan.* In the introductory article he outlines some of the problems of planning in the hope that it will keep the "feet of future planners on or near the earth."

The case studies present the policies, problems, and educational implications of planning at the *international, national,* and *regional* levels. Attention might be drawn to the educational part of the Seven-Year Plan in Iran. A foreign firm, the Overseas Consultants, Inc., was employed to produce the basic plan for the economic development of that country. One of the six divisions of this organization was that of Education. The report on the educational aspects of the Plan has been generally recognized as an unusually comprehensive blue-print for the utilization of educational techniques in the economic development of a Middle Eastern nation. Political unrest and economic crisis may account for much of the failure to implement what were conceded to be sound proposals.

Mention might also be made of a remarkable example of the application of planning to technological development in Chile. Here geographical conditions—and of the fact that there were only two coal mines of commercial importance—had limited the standards of living of its people. Their production had long been barely sufficient to meet domestic requirements. Chile had to import steel and there was no possibility of developing heavy industry. The electrification scheme, however, planned to produce a nation-wide hydro-electric network to utilize the potential from the many short rivers of great fall. Domestic heating, railway transportation, and electrical power would be provided by this grid, and the coal production from the two mines would then become available for metallurgical industry. A major steel plant was built with American technical and financial aid, and within five years Chile was meeting domestic needs and actually selling surplus steel in the world market.

THE EDITORS.

CHAPTER ONE

THE EDUCATIONAL ASPECTS OF PLANNING

So much has been written on this subject, especially since the last world war, that a brief introduction to a number of practical case-studies may justly assume that the theory underlying the relation of education—as well as its potential contribution—to the wider aspects of national, or even international, planning will be generally known and accepted. Apart from the many books which have been written in recent years by individual authors, a mass of literature has been issued by UNESCO and other organizations, which defines in more or less concrete terms how the development of public instruction can and should be integrated with schemes for social betterment. These schemes are in many cases primarily concerned with the so-called under-developed areas and with the lower stages of education therein. Few people will be found to disagree with the principle that Fundamental Education should cover not merely scholastic attainment but also its practical application to raising the standards of living in the community as a whole. At the same time, while the theory that schemes of educational and social reform and development should be interrelated and interdependent may be accepted, experience suggests that the difficulties in the way of harmonizing the ideal with the practicable are at least as great in this field as in any other. If reference to one or two of them will help to keep the feet of future planners on or near the earth, it may afford some justification for this foreword. For what appears to be lacking only too often in the plans for aiding backward areas is not so much good intentions, sound ideas, or even finance, as an inadequate appreciation of what is needed or what can in fact be achieved under given conditions in widely differing (even though perhaps geographically contiguous) areas. People who have had the chance of studying at first hand what has been done to put Fundamental Education on its feet in countries like India, Pakistan, Thailand, or Afghanistan, will realize how very different the methods of approach must be in each case. There is no golden rule, the observance of which will ensure that education makes a substantial contribution towards the wider aspects of social planning; let alone the maximum of which, wisely directed, it is capable. It may, therefore, serve a stimulating and not a depressing purpose if attention is called here to some of the difficulties the planner will have to surmount if his good intentions

are not to be sunk in a bog of frustration. It may even be advisable to re-emphasize the point that what follows relates primarily to educational aspects of planning in the under-developed areas. One or two aspects of modern educational development *vis-à-vis* general social planning in the more advanced countries will be considered later.

Local Circumstances and Finance

Perhaps a few words should be said at this point about two general issues, both of which (and especially the second) will necessarily help to determine the actual carrying out of any educational plan, whether it is conceived as a part of a national development scheme or whether it aims at applying what may be described as international educational theory (for example, as defined by UNESCO) to the circumstances of any given area. For reasons given elsewhere in this article there are still many areas in the world, and particularly in Asia and Africa, where a number of purely local circumstances may make it impossible to implement any international or regional scheme, even though the arguments for its over-all validity may be fully appreciated by those responsible for social planning in the area concerned. To give one instance: when in 1943 I was helping to prepare a plan for putting India on the educational map after the war, several important reforms (which would have been accepted as educationally sound in Western countries) had to be modified or scrapped in deference to the needs or susceptibilities of the minority communities and above all of the ' Depressed Classes '. At the same time it would be foolish to denigrate the value to the so-called backward areas of the existence of an encyclopaedia of world theory and practice in education, such as UNESCO is building up. One should also not overlook the contribution which this YEAR BOOK has been making in this connexion. Those who have shared my experience as a planner will, I feel sure, not have allowed themselves to be discouraged by the impact of local circumstances. Rather will they have been stimulated by the ever-present problem of adjusting the theoretically desirable to the practically feasible.

The second issue, to which in my experience enthusiastic foreign planners or missionaries are sometimes inclined to expect a more or less precise answer, is the amount of money which education is entitled to be allotted out of the total provided for any given national or international plan. Apart, however, from *ad hoc* schemes, there are people who seem to think it practicable to lay down what part of the national resources, whether expressed as a proportion of the national income or the public revenues, should be allocated to the service of education. I must admit to having dabbled in this unprofitable exercise both in England and in India. I found so many variables from place to place that I am firmly of the opinion that, as Sir Thomas Browne said of the song that the Syrens sang or the

name that Achilles assumed when he hid himself among women, it is "a puzzling question but not beyond all conjecture". Yet the educational planner would be ill-advised to proceed on the assumption that he can count on or even establish a claim to any specific proportion of national or over-all resources available for development. Fortunately or unfortunately, an educational budget is easier to prepare than is the case with some other public services. Roughly two-thirds of it will be determined by teachers' salaries, if it is a fairly comprehensive scheme and not confined to one highly specialized form of education. So the educational planner, having decided how many teachers he wants and the salaries necessary to secure suitable personnel, should be able to stake his claim with reasonable confidence. Should the need arise, he can cut his coat in accordance with the cloth allotted to him without quite the same risk of spoiling the whole show, as may well happen in other forms of large-scale planning.

Social Problems

UNESCO and others have rightly defined Fundamental Education as something which tries to take account of the whole way of life of the man or woman, boy or girl, in the community to which he or she belongs, and by inter-weaving itself with the other social services to make a highly important and practical contribution towards raising standards all round. Thereby the recipients of education (not always too enthusiastic in the early stages about it or the sacrifices it may involve) will become convinced that it is a good thing in fact as well as in theory, and will go on wanting more of it. Moreover, they will be at least on the way to conversion to the belief on which alone freedom and democracy can be sustained; namely, that given the opportunity the human race is capable of getting better and better instead of progressively degenerating as it recedes from some ideal republic or some golden age. But, unfortunately, what might be quite hard enough to achieve, if the social planners could start with a clean slate—which they could hope to do only if the people they were out to help were living in a state of primitive simplicity like Rousseau's noble savage—becomes much more difficult when the apostles of reform and uplift find themselves up against age-long obstacles deriving from a host of often quite unrelated historical and other causes. Obscurantism in various forms, religious, political, economic, among others; a low standard of living due probably, but not inevitably, to the foregoing; the effects of long periods of foreign domination or infiltration; some or all of these may have produced an accumulated mess on the slate. Well-intentioned but ill-advised attempts to remove the mess may only make it more sticky. If, to take only one instance, a planner trusting in the enlightened utterances of his political leaders were to believe that in dealing with India and Pakistan he need no longer

worry about the caste system in the one or *purdah* among women in the other, he would be riding for a fall. Other problems abound in the under-developed areas which are not due to religious or social conventions, or even at any rate directly to lack of resources. Thailand, for instance, is a country which has got itself into difficulties as a result of its own good intentions. Over a generation ago, on a wave of enlightened uplift, primary schools were established all over the place and a large (one might almost say in the light of experience an indefensibly large) proportion of the national revenue was allocated to education. To-day all these village schools, if they are to be brought up-to-date, require not only better trained teachers but also modern equipment for creative activities. The provision of these will impose a financial burden which, even with outside help, the national exchequer will find almost impossible to bear. In Afghanistan, again, the present organization of higher education ingeniously devised many years ago to save a poor country from the necessity of providing its own advanced instruction—particularly on the technical side—now puts grave obstacles in the way of the development of an integrated system of public instruction culminating in a national university.

Industrialization and Trained Personnel

But the task of cleaning the local slate before writing a new educational plan on it, with or without outside help, is by no means the only one which faces those areas with which present-day planners are mainly concerned. Many of them have accepted, willingly or reluctantly, the fact that they must industrialize themselves, if they are to have any chance in the long run of financing the schemes for improving the conditions under which their people live. But this does not save them from the old dilemma: how to start new industries without trained personnel and experts or how to get people to undergo technical training without some guarantee that there will be new industries to absorb them once they are trained. It is true that the considerable amount of outside expert assistance available at the moment has to some extent blunted the first horn of this dilemma. But as a whole it will not cease to exist until educational planning in the technical sphere has made adequate provision for satisfying from local talent the requirements of the new industries, upon which a nascent democracy must depend for serving its essential needs, social as well as economic. There is, however, a wider issue, which would seem to impose on the new aspirants to full democratic status a duty at first sight at variance with the democratic principle of equal opportunities for all. States which have recently become independent, especially when they have got rid quickly of the former foreign element in their administrative and technical services, suffer naturally from a shortage (which may be fairly prolonged) of experts in their essential fields of activity.

Consequently their first objective must be not merely to train experts among their own people but to mobilize the latent reserves of brain-power in those sections of their population which have not hitherto had access to the higher ranges of education. India said good-bye to the British members of the Indian Civil Service and other services in 1947. Since then she has been trying to carry on one of the most exacting governmental tasks in the world to-day, by means of the administrative and technical talent extractable from not more than the 15 per cent. of her population that is literate. Pakistan, which after Independence retained many more British officials than India, has postponed rather than averted the day when she must fall back on her own expertise. The same applies, *mutatis mutandis,* to many other emergent nations. Help supplied by outside agencies, international or otherwise, can never be a permanent alternative to the utmost development of the resources of brain and character inherent in their own people. For this the prerequisite is a universal, free, and compulsory system of primary education, one which will not only provide the minimum preparation for citizenship for all but will also pick out those whose abilities will with further training enable them to supply the skilled service which the state needs.

Selection, Democracy, and Over-all Planning

It may of course be objected that the provision of exceptional opportunities for the chosen few is repugnant to pure democratic theory: but it remains a matter of life and death for many states genuinely striving towards real democratic status. A century ago, when in Britain the same problem confronted those in charge of affairs, a contemporary thinker said: " The aim of higher education is to produce an *élite,* not for its own sake but for that of Society." Even if savouring of pragmatism, it is permissible to believe that a democracy in order to survive must function with reasonable efficiency and that its educational system must be so organized as to secure that end. This involves a very careful selection of those admitted to the stages of higher education. So long as this selection is carried out with intelligence and integrity, and the determining factor is the ability of the pupil to profit—not that of his parent to pay—it can at least be regarded as a long step away from the caste system of higher education. Quite apart from the purely practical arguments in its favour, it is a move in the direction of equal opportunities for all to go as far in the pursuit of knowledge as their physical and mental make-up can justify.

Therefore, the aspects of educational planning in relation to general social planning should be determined by two main criteria. First, does the educational plan equip the ordinary man or woman, boy or girl, to make an adequate contribution to or play an effective part in the scheme for the uplift of the society to which he or she belongs? Secondly, is it capable of picking out from the mass those

who have the ability to render outstanding service to the state, particularly during the formative period?

What has been said so far about the urgent need for new and emergent nations to develop such latent resources of brain-power as they possess and to concentrate on this, so far as the planning of their higher education systems is concerned, may be accepted as an inevitable, if temporary, necessity. Its logical implementation, however, involves a consequence at which many may jib. It is the distribution of facilities in the more advanced stages of education, whether in universities, technical or research institutions, in accordance with the future needs of the community, as forecasted by long-term planners. Such a forecast, even if the material for a reasonably accurate one exists, may involve restrictions on the free pursuit of knowledge by the individual, which are repugnant to believers in freedom. And yet, what used to happen in the old India—and may still be happening in the new one—is patently uneconomical, whether considered from the point of view of the state or of the individual. The Provinces (now States)—being autonomous in educational matters and inspired by what in a better organized system might have been a profitable spirit of emulation—were activated in university provision more by what the neighbouring Provinces were doing than by the ability of the area they served to absorb the graduates their universities produced. Moreover, it is much cheaper to turn out an Arts or Law graduate than a scientist, technologist, or doctor. Their output, therefore, for economic reasons bore less and less relation to the immediate requirements of the community as time went on. And it is not simply a question of the absorption of future graduates in the social and economic spheres. The very urgent problem of the proper allocation of the available resources of expertise between teaching and other development-training needs cannot be ignored either by the over-all planner or by those whose primary interest lies in education. The solution is not made any easier by the fact that in most of the backward areas the urgent educational need is for technical teachers, while nascent or expanding industries are eagerly looking for people with similar qualifications.

The More Advanced Countries

There is perhaps not a great deal that can usefully be said here about the social, economic, and political aspects of educational planning in the more advanced countries. Although much thought has been and is being given to this subject, there remain some loose ends that need tying up. The recent public concern in Great Britain about illiteracy is at least sufficiently documented to warrant a very careful inquiry into both the aims and the methods of teaching at the lower stages. In the U.S.A. (which prides itself with some reason on an educational system more democratic in theory and practice

than anywhere else in the world) there is fairly widespread doubt as to whether the standards achieved, particularly in the higher stages, are satisfactory: or whether the most able students are not being held back by a sentimental adherence to an egalitarian theory, which is biologically invalid. Then again, in countries with highly centralized systems like France, reformers are pressing for a more liberal acceptance of the principle that the schools belong not to the state but to the people. Perhaps the most striking testimony to the fact that educational planning is inseparable from the wider aspects of social uplift has come in recent years from the U.S.S.R. In the early days of the Revolution, education in Russia was drastically reorganized in the light of pure revolutionary doctrine. As Five-Year Plan succeeded Five-Year Plan, it became increasingly clear that the paramount need for experts to implement these plans must be given priority over all other considerations. It is interesting to note how closely the structure of the Soviet educational system to-day appears to approximate the British system of a generation ago; except, of course, for the absence from the latter of any deliberate attempt at political indoctrination. Russia indeed, which at any rate in 1917 could be classed among the under-developed areas, may justly claim credit for a serious attack on illiteracy, but she has been compelled in order to produce the experts she needs to revert to a selective system of higher education.

Conclusion

The impulse to provide aid on a generous scale to the under-developed countries, even though in some cases a considerable amount of self-interest may dilute humanitarian motives, is so full of promise for better global conditions that one hesitates to conclude this introduction with a warning against a possible danger implicit in too much outside assistance. It would be a pity if a gesture of international sympathy and co-operation, long overdue, were to lead to the creation of a vested interest in the perpetuation of aid services. After all, the real object of all international aid should be to enable those aided to get on without it in the shortest possible time, and not to establish cadres of professional aiders. Apart from this the fact that foreign aid has usually to be provided on a short-term basis creates another problem. It is not easy in a world suffering from an over-all shortage of experts to find people of the requisite calibre to engage in missionary enterprises of a temporary kind. And yet in many of the backward countries those in authority are accustomed to expect a very high standard so far as external aid is concerned. Unless this standard is maintained, there is a real danger of local reactions, which may adversely affect not merely international co-operation but also public appreciation of how much education, when wisely conceived and directed, can contribute in almost every effort for human amelioration.

JOHN SARGENT.

CHAPTER TWO

EDUCATIONAL AND INSTRUCTIONAL ASPECTS OF UNITED NATIONS TECHNICAL ASSISTANCE

THE technical-assistance programme of the United Nations and its specialized agencies is, among many other things, an experiment in international education. Its basic aim—the promotion of higher living standards through the sharing of expert skill and techniques between the highly developed and the less-developed areas of the world—is largely achieved through educational methods. Much of the assistance offered by the United Nations follows accepted educational patterns: the holding of training centres, the award of fellowships and scholarships, the sponsorship of seminars. Even in the case of the provision to governments of expert advice—a form of assistance which, though not new in itself, has become an intrinsic part of the United Nations programme—the experts in nearly all cases are expected to devote some time to the training of officials or technicians in the country in which they are stationed, so that their work can be carried forward after their departure. Any survey of the educational aspects of the technical-assistance programme, therefore, covers almost the whole area of the programme.

A world-wide programme, involving aid to a hundred countries and territories and experts of some sixty nationalities, is necessarily a complex and sometimes a cumbersome undertaking. National susceptibilities have to be respected; recruitment of experts is not easy, for in addition to demanding high professional qualifications, the Economic and Social Council of the United Nations had wisely insisted that they must possess 'sympathetic understanding' of the cultural and social problems of the countries to which they are assigned; the award of fellowships for study throughout the world involves formidable administrative problems. No assistance is given to governments except at their express wish and in the form which they desire.

The United Nations Technical Assistance Board administers the programme. This board consists of the following operating agencies: The United Nations Technical Assistance Administration (TAA), the International Labour Organization (ILO), the Food and Agriculture Organization of the United Nations (FAO), the United

Nations Educational, Scientific and Cultural Organization (UNESCO), the International Civil Aviation Organization (ICAO), the World Health Organization (WHO), the International Telecommunications Union, and the World Meteorological Organization. The International Bank for Reconstruction and Development and the International Monetary Fund do not participate actively in the programme but are members of the Technical Assistance Board.

During the three years ending in January 1954 some three thousand two hundred experts served under the programme. Governments have asked twice as much assistance as the international organizations, with their very limited funds contributed voluntarily by governments, have been able to provide.

Pakistan

In order to show the educational impact of the technical-assistance programme on national development, it may be of interest to take the example of a single country, Pakistan.

Lahore now has one of the world's largest and best-equipped training centres in railway operations and signalling. It will serve the entire South-East Asia region which, like Pakistan, has railways that are mostly single-tracked and unable to cope with the rising need for freight-moving facilities. The international staff of railway experts will instruct the students, all experienced railway personnel, in traffic-control techniques and use of signalling equipment which could virtually double the carrying capacity of the lines if generally applied. The centre is an outgrowth of a study tour of Europe, North America, and Japan by Asian rail experts, arranged by TAA in co-operation with the Economic Commission for Asia and the Far East.

To implement Pakistan's programme for crop increases, the FAO has assisted in a series of pilot projects in the Indus Valley, where methods of land reclamation and irrigation agriculture were demonstrated. Five farm-machinery experts led personnel training in the operation, maintenance, and repair of the seven hundred and fifty tractors and related equipment which Pakistan provided for these and other projects.

Modernization of techniques is basic to increasing industrial output, a major concern of Pakistan, and an ILO expert has helped the Government organize training courses in labour administration. Another has assisted in organizing 'Training-Within-Industry' to help supervisors, in charge of production, make the best use of men, machines, and materials. More than eight hundred Pakistani supervisors have been so trained, plus a nucleus of nearly fifty instructors in 'Training-Within-Industry' techniques. Through application of expert advice on improving production methods, one iron foundry has, for example, increased its output by 44 per cent.

Since Pakistan has limited facilities for teaching and training

specialists in sciences such as physics, metallurgy, and mineralogy—essential for industrial development—UNESCO has provided experts in these fields to work in the Punjab, Dacca, and Karachi Universities, and has also made fellowships available.

To strengthen the teaching of medical sciences, WHO has supplied professors in pathology, physiology, and anatomy to Pakistan medical schools. At a field training area in Lahore, a WHO team is helping the Government to train doctors and health workers and is trying out methods of rural health care and environmental sanitation. Four Maternal and Child Health Demonstration Centres are training ' community midwives ', and at a nursing school in Dacca three nurse educators have been giving refresher courses and helping to prepare student nurses. WHO teams have also been demonstrating modern methods of treating and controlling tuberculosis and venereal disease.

While foreign experts are conducting training programmes in Pakistan, qualified Pakistanis are studying abroad on United Nations fellowships and scholarships. As part of the Government's irrigation programme, for example, an executive engineer spent a year at agriculture experimental stations in the western part of the United States, studying irrigation, drainage engineering methods, and methods of conducting irrigation extension work among farmers. On his return he went to work on the Indus Valley reclamation projects.

Up to January 1954, 189 Pakistanis had received fellowships under the technical-assistance programmes of the United Nations and specialized agencies.

Others forms of technical assistance to Pakistan are educational in the broader sense. Preceding the instructional phase of some projects, United Nations experts have advised the Government in its planning and have undertaken research and surveys.

Since the Government attaches high priority to the development of the Baluchistan States Union, a relatively backward area, it requested a United Nations survey team to study development possibilities there. Experts in mining, hydro-electricity, geology, irrigation engineering, and range management have been taking part in this survey. United Nations research has been undertaken as a preliminary step to a large-scale industrial programme, and research in rain-making for arid zones is also being carried out.

Experts are further advising the Government on the following plans: the development of a telecommunications programme, particularly urgent because East and West Pakistan are one thousand five hundred miles apart; the construction of a model refugee township, which would be a pilot scheme for solving Karachi's acute housing shortage due to the influx of population when Pakistan became an independent state; the organization of technical education, at various levels, and of broadcasting to schools; the develop-

ment of newsprint production, which will help meet needs arising from increasing literacy; the improvement of the design and construction of small water-craft to increase carrying capacity; and the organization of the foreign exchange department of the National Bank of Pakistan.

Experts will also assist the Government in analysing and evaluating technical-assistance programmes already undertaken, such as the results of the 1951 census.

General Survey

The principal forms of technical assistance, as the Pakistan example indicates, include: expert advice, surveys, direct teaching, demonstration and pilot projects, training of local technicians and officials through the establishment of national and regional centres, fellowships and scholarships, and research. The examples given below illustrate ways in which these various methods are being used throughout the world.

Expert Advice

Bolivia is engaged in a nation-wide reorganization and diversification of its economy which involves study, planning, and operational changes on a scale the Government has not hitherto undertaken. It requested and received advice from the United Nations. In implementing the United Nations proposals, it received further aid from international specialists in various fields. In addition, it followed a United Nations recommendation and itself employed, in its own Government service, technical consultants made available by the United Nations in co-operation with the specialized agencies. These men are currently advising on the reshaping and operation of the Ministries of Finance, Agriculture, and Labour; on social security and public administration; in the office of the Controller-General; and in the Central Bank.

Indonesia and Libya draw heavily on internationally recruited advisers for their planning operations and their central ministries. Jordan has a specialist advising on the development of its meteorological services, while Burma is utilizing United Nations town-planning advice in replanning its capital city to cope with the recent large influx of population to it.

Surveys

Sometimes, in drawing up its plans, a government realizes it cannot wisely launch a development project until a survey has been made to determine economic and social potentialities. Five per cent. of United Nations technical-assistance resources are devoted to such assessments. One survey, conducted by FAO for the Brazilian Government, confirmed that a prosperous and extensive forestry industry is possible for the Amazon Basin. As a result, the Govern-

ment now has under way a programme which may triple timber production in this area in the next decade, and has asked for FAO co-operation in planning the area's colonization.

At the request of the Government of Nepal, an inventory is being made of the country's mineral resources potential. Israel sought help in building up geological information as the basis for oil prospecting.

Occasionally, as in the case of Bolivia, a country requests a basic national survey as a preliminary to launching its over-all development programme. Such a survey was undertaken in Colombia under the leadership of the International Bank; it resulted in recommendations for exploiting resources and for new rail lines to open up regions now precariously linked by a not always navigable river.

On the basis of such recommendations, a government selects those it considers most essential and frequently requests United Nations assistance in their implementation. A variety of methods are used:

(1) *Direct Teaching:* Often technical information must be carried directly to the people. WHO lays great stress on education of the public as a necessary foundation for improving national health. Its nurses travel from village to village in the Far East, instructing mothers on the need for regular bathing of babies, nutritive diets, safe drinking-water, protection against insects.

In Ethiopia, FAO specialists visited farms, introducing farmers to improved varieties of seeds and showing them how to use improved hand-tools such as scythes, both necessary elements in Ethiopia's programme for increasing crop yields.

(2) *Demonstration Projects:* One of the oldest methods of education is one of the most useful in technical assistance. That is, teaching by demonstration.

Farmers in Afghanistan used to dump their sugar-beet pulp into the Khunduz River because they believed it would poison their livestock. Actually it offered essential requirements for improving the animals' health and increasing their productivity. To prove this, an FAO specialist collected twenty-five head of cattle and twenty-five head of sheep. He set up a demonstration feed lot, outside one of the largest sugar-beet factories, and fed them a mixture of beet pulp to which had been added a little molasses, cotton cake, and wheat straw. Afghani farmers came to watch the animals die. Each day for a month they came and looked with increasing amazement. For instead of dying, the animals got fatter and friskier. Finally convinced, farmers for miles around were driving their cattle in for a free sample.

In Cairo there is a Demonstration Centre for the Rehabilitation of the Blind. Its director is a blind Canadian who is training enough Egyptian personnel to operate the centre without the use of experts from abroad. His successor will be an Egyptian, recently returned to his country after studying abroad on a United Nations fellowship.

In addition to training blind persons to earn a living as craftsmen, the centre trains workers to teach Braille reading and give handcraft instruction to the blind in their own homes. Graduates of this department will run the thirteen offices planned by the centre to service a large section of Egypt's seventy thousand blind persons.

The centre also prints textbooks for the blind in Unified Arabic Braille, which was established by UNESCO. Phonetically adapted from the Roman alphabet Braille, it reads from left to right, the opposite of regular Arabic writing, in order to facilitate the learning of Western languages. The director of the printing operations is a blind Syrian who studied in Paris on a United Nations fellowship. He also trains other Braille printers and is directing the creation of the first Braille lending library in the Arab world.

(3) *Pilot Projects:* These demonstrate, on a small scale, how the introduction of new concepts and techniques can speed national development. In Israel and India, pilot projects on productivity play an important role in increasing factory output. UNESCO supervises an education pilot project in Thailand. And the TAA is helping the Government of Venezuela to set up that country's first pilot centre for the rehabilitation of disabled persons.

(4) *Training Centres:* A technical-assistance mission is not really successful until it has eliminated the need for its services. Thus a major portion of technical-assistance work is devoted to training local personnel to take over tasks and carry plans forward themselves. Much of this is teacher training.

UNESCO, working with other international agencies, has sponsored Fundamental Education Centres designed to train teachers, health workers, and other specialists needed to aid in raising rural living standards. They also produce educational materials such as books, posters, and audio-visual aids.

The pace of development is slowed in many countries because of the lack of technically skilled workers and of knowledge of effective methods of production, equipment maintenance, and power utilization. Yugoslavia, aware of this obstacle, asked the ILO to help it expand its nucleus of highly qualified people able to train others. The ILO has sent to Yugoslavia, from more industrialized countries, forty-four specialized foremen-instructors to hand on their skill and experience to Yugoslav workers in nine branches of industry, and to help place nearly four hundred Yugoslav skilled workers and technicians in west European factories for short periods of study and training.

In Libya a modern training centre has been set up to prepare technical and clerical personnel badly needed by this newly indedependent state. It is under the direction of ILO but has the co-operation of UNESCO, WHO, and UNICEF (International Children's Fund), and the Governments of the United Kingdom, France, and the United States. The centre has a foreign director

and thirty-five instructors provided by ILO under the Technical Assistance programme. It offers a two-year course in trade and clerical studies, a three-year trades course, and a four-year secretarial course.

In the field of vocational training, ICAO has sent a team to Indonesia to help train young Indonesians in air-traffic control and radio communications, and as engine mechanics and aerodrome managers.

Two ILO experts from France are attached to Haiti's Vocational School at Port-au-Prince to help give Haitian youth much-needed technical training in motor mechanics and automobile ignition systems.

At the Indian Institute of Statistics, experts supplied by TAA trained factory supervisors in the use of statistical quality-control methods by devising visual aids which demonstrated the mathematical principles involved.

WHO has assisted in setting up many training schools, including a Health Officers' School in Cambodia, a Nursing School in North Borneo, a Physiotherapy School in India, and an Anti-Tuberculosis Training Centre to serve South-East Asia.

(5) *Fellowships and Scholarships:* Fellowships are granted to qualified senior members and scholarships to promising junior members of the civil services of governments whose countries are in the process of development.

Fellows and scholars are sent to countries where facilities exist for observation, higher training, or advanced study which they cannot get at home. Their training abroad is often complementary to the training which local personnel receive from foreign technical-assistance experts. For example, a Norwegian engineer has been sent by TAA to advise and train Indian officials on the latest techniques in the use of a new photogrammetric plotting machine for conducting surveys and making maps. Meanwhile, two Indian Fellows have had two months' training in Switzerland in operating the device.

The TAA helped establish a School of Public Administration in Brazil and supplied some of the faculty members. In addition, it awarded Brazilian professors fellowships for advanced training in other countries so they could replace the internationally recruited staff during the following two or three years.

In connexion with Ceylon's forest-development project, an employee of Ceylon's Forest Department spent twelve months in the United Kingdom and six in the United States studying wood technology. He has now returned to Ceylon as workshop engineer of the research branch of the Forest Department and will eventually take complete charge of the department's sawmill, woodworking, and bending shops and kiln drying shop.

Fellows and scholars from under-developed countries are not

always sent to advanced countries. A Thai agriculture officer, for example, was sent to study co-operatives in India and Ceylon, as it was thought the practices of another Asian country might be more easily adapted to Thailand than, say, those of Sweden.

Regional Technical Assistance

Where development problems are not limited to one country but common to its whole area, technical assistance often is furnished on a regional basis. This is not only economical but provides the basis for mutual understanding and co-operative action.

At a recent Housing Seminar in New Delhi, representatives of nineteen nations of Asia and the Far East met with United Nations housing specialists from Australia, France, Greece, Israel, the Netherlands, the United Kingdom, the United States, and Yugoslavia. " It was not ", said one of the experts, " a case of our telling the under-developed countries the answers, but an exchange of information. We learned as much as we gave."

This regional seminar is expected to lead to requests for technical assistance on community development projects which will utilize under-employed labour in a system which allows self-builders to count their labour as capital investment in securing mortgages. Skilled labour will supervise and assist in community house-building where necessary.

WHO has held European seminars on health education, preventive medicine, sanitation, and alcoholism; and it joined with ILO in sponsoring in Italy a seminar on occupational health.

In Central America, groundwork is under way for an Institute of Industrial Technological Research to serve the Governments of Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua, as part of a programme of economic integration of Central America.

A Fishing-boat Congress was held in 1953 on the design and equipment of fishing boats, with the idea that pooling knowledge on fishing-boat operation might lead to increased yields of fish. Forty-one states were represented, including developed as well as under-developed countries.

Research

Research is a significant factor in technical assistance. For example, economic development is hindered in many countries by the existence of desert areas. Hydrological research is a major factor in selecting sites for artesian wells. An Australian scientist, who played an active part in his own country's campaign to put semi-desert land to work, was sent to Egypt to assist that government in its rapidly expanding programme of desert research. Israel's project of desert reclamation is dependent on a technical research project in soil science.

Two FAO experts on the improvement of cattle production have

been undertaking research on haemorrhagic septicaemia at the Veterinary Research Laboratory at Insein, Burma. They have succeeded in developing a vaccine which has been tested with such favourable results that it may prove a solution to the problem of this devastating cattle disease, commonly known as 'shipping fever'.

A Swiss building expert is in Israel assisting its Institute of Technology to plan the establishment of a building-research centre to carry on applied research in utilizing materials for construction purposes. Similar research is being undertaken in South-East Asia.

Inter-Agency Co-operation

The technical-assistance programme is a co-operative undertaking of the United Nations and the specialized agencies. Many development projects require assistance from several agencies. A health project, for example, may yield results only if new crops are sown, soap production introduced, co-operative marketing of produce arranged, income increased through supplementary handcraft, and literacy encouraged. Thus in the Cuscatlan Valley Demonstration project at El Salvador, WHO takes the lead but FAO, UNESCO, and ILO also participate.

The co-ordination of field work within a given country is usually handled by a 'resident representative', appointed by the Technical Assistance Board. Twenty such representatives have so far been appointed. The Resident Representative watches the progress of projects in terms of their relation to other work on which his host government is using or wants to use international experts. He reports to the Technical Assistance Board on these factors so they can be taken into consideration in granting requests from governments for further technical assistance.

The Technical-Assistance Expert

Over three thousand technical-assistance experts have been sent into the field by the United Nations and specialized agencies so far. At any given moment, some sixty nationalities are represented in this corps. A country which learns from foreign experts in one field often sends experts of its own to help another country in other fields. This emphasis on *exchange* of information is an important factor in the programme, which from its inception has been conceived as a pooling of resources to which all countries may be able to contribute.

In certain fields, the less-developed countries may have more expertise than the 'developed' countries. An Indonesian fish expert, for example, has been drawing upon traditional skills to train Haitian and Thai nationals in fish farming of tilapia and edible carp to improve the diets of their countries by making more proteins available. A Haitian coffee specialist is aiding Ethiopia to revive its

coffee industry; and a Yugoslav leather specialist is helping Indonesia to improve tanning processes.

A country's level of development may also determine the choice of an expert. When Ecuador asked for help in the training of social workers in the medical-social and child-welfare fields, the TAA sent a women specialist from near-by Colombia. In addition to her outstanding achievements in child-welfare work, she knew the particular problems of Latin America.

Financing

Some of the technical assistance provided by the United Nations is financed from the organization's regular budget. Most of the work of the international agencies in this field is, however, financed by a special fund to which Members of the United Nations and certain non-Member States pay voluntary contributions. The Special Fund has amounted to between $20 million and $25 million each year. Fifty-five states contributed in the first financial period, 1950–51; and seventy-one have pledged contributions for 1954.

It is in terms of these voluntary contributions that commitments are scheduled. This poses a series of difficult choices to the operating organizations and the Technical Assistance Board. With the funds anticipated, they can meet only a part of the requests from governments, and since realization is sometimes short of anticipation, further cuts have to be made from requests in the name of prudence and efficiency. It would have taken $43 million to meet the requests submitted for 1953, compared to funds for the year estimated at $25 million. As the year progressed the probability of getting the full $25 million decreased, and the programme had therefore to be very carefully readjusted in the middle of the year.

The Technical Assistance Board is seeking to establish a reserve fund to level out irregularities in the flow of contributions; and it is urging contributing governments to indicate continuing support for a number of years so that development projects whose implementation requires more than a fiscal year will not be held in an administrative straitjacket.

Technical-assistance projects, once launched, must be brought at least to a point where the recipient country can carry on; otherwise the whole effort is wasted. Projects frequently continue from one year to another. Of forty-nine United Nations experts working in Burma this year, nine are in their third year of assignment in the country. Nearly two-thirds of the more than nine hundred projects scheduled for 1954 began in a previous year. Thus with such limited funds, the Technical Assistance Board must be very chary of new commitments.

The distribution of assistance is roughly as follows: Africa—11·6 per cent., Asia and the Far East—34 per cent., Europe—8·1 per

cent., Latin America—25·1 per cent., Middle East—18·5 per cent., Inter-Regional—2·7 per cent.

Changing Emphasis

Certain changes of emphasis have developed since the inception of the programme. In some fields there is increasing stress on the educational aspects of assistance. Major health drives against yaws, malaria, and tuberculosis, for example, have been sufficiently successful for emphasis to shift towards preventive programmes. These involve widespread public-health education. Industrial projects are maturing to the point where many depend on expert guidance in using advanced equipment. In the field of public administration there is a tendency to substitute long-term, over-all training programmes for short-term institutes designed to meet particular, immediate needs.

Other fundamental changes have resulted from the development of administrative methods and from growing experience in recruiting experts, assessing requests, and allocating funds. A first attempt was made in 1953 to shape the activities in each country for the following year in the country itself with the help of TAB's resident representatives and of representatives of agencies. This, in turn, enabled the TAB to evaluate each country's programme in terms of regional allocation of its funds, and an over-all balance of agency activities.

In the field, the number of training enterprises tends to rise, and experts called in on specific operating projects combine, increasingly, the training of local personnel with their advisory work.

Fully matured, the United Nations Programme of Technical Assistance for Economic Development will become predominantly an educational device for spreading skills from countries where they already exist to areas where they are needed to improve the world's use of human and material resources.

A. D. K. Owen.

CHAPTER THREE

EDUCATION AND TECHNICAL ASSISTANCE: THE COLOMBO PLAN

In the great Asian arc from Pakistan and India, through Burma, Cambodia, and Viet-Nam, on to British Borneo and Indonesia a vast international enterprise in education in the broadest sense has now become a going concern. This is the technical co-operation scheme of the Colombo Plan.

The Plan as a whole aims to develop the economies of the area in co-operation with technical-assistance schemes of the United States and the United Nations. The result is a movement to spread knowledge and inculcate skills and to introduce modern techniques in agriculture, in the services, and in industry. A social transformation will be the inevitable outcome. All manner of experts or technicians have come into the area: from fundamental-education and national-radio consultants to irrigation and power engineers, from vocational-training experts and university professors to thoracic-surgery teams and factory managers, and from agricultural-extension and research workers to production managers. On the other hand, under the Plan and the other schemes, the countries are sending their young people abroad in great numbers for training when this cannot be given so well at home. Some of them are coming back to work with the experts in building, equipping, and staffing schools or training institutes in their own countries. More important perhaps, statesmen, administrators, educationists, and others from the member countries are joined in a close community and equal partnership for the continuous planning, execution, and daily extension of the scheme to wider and wider areas of economic and social life.

In intention at least, and increasingly in practice, the scheme is as wide as education itself, and its planning and operation no less extensive than general national and international administration. It adds directly to the educational resources of the area and it indirectly educates through the psychological stir and social ferment generated by the experts of diverse backgrounds and outlook attracted from all the member countries of the Commonwealth. And it sends abroad and educates in the broadest sense a great stream of young people.

The schemes under the Plan showed some early uncertainty due to problems of organization and a lack of familiarity with the great

problems of planning and administration. This phase is passing. Yet, although all have learned from experience, the extent to which development plans have been carefully prepared and unified and not left as merely a list of projects varies among the different countries in the region. The problems of planning are doubly difficult in these countries where the state has to do so much owing to the reluctance of private business to branch out from old commerce into new industry.

As pointed out by the Consultative Committee of the Plan in its second annual report, each country must continuously review its developmental programmes to discover what resources are available or are likely to become available, including fields of enterprise usually monopolized elsewhere by private business. It must make some calculation of the amount of capital which will be available for development from both internal and external sources. It must consider what equipment and materials can be procured and what managerial and technical men and skilled workers will be available or can be trained in sufficient numbers. Each project has to be studied in detail before capital is invested to make sure of its technical soundness and to ensure that the return will justify the outlay on the particular project rather than on alternatives. The different projects must then be placed in order of relative priority, so that the first things are tackled first and that the best use is made of the country's resources.

Most of the countries now have planning commissions or similar bodies to prepare the plans and to keep progress under continuous review, suggesting changes in the projects or in relative priorities in the light of experience gained or of changes in conditions since the plan was drawn up. All derive immense benefit from the continuous exchanges of views between officials of the member countries of the Plan during the year and at the annual meeting of officials and ministers. These exchanges of views are of great help to the countries in bringing their civil services to maturity.

Problems and Objectives of the Plan

The Colombo Plan programmes, prepared in 1950 for the six-year period 1950–57, are now approaching mid passage, and hence some stocktaking is possible. In 1950 the greatest need for development was in three fields—agriculture, power, and communications—then followed small-scale industry, except in India and Pakistan, where the conditions for large-scale industry already exist. Since then the plans have been revised realistically to meet changed economic conditions, but the general outline remains the same, and in its 1953 report the Ministerial Consultative Committee of the Plan decided that the original objectives had been conceived on the right lines.

The aim of the countries of the area is to achieve, by 1957, 13

million more acres of land under cultivation, 6 million more tons of food grains annually, 13 million more acres of land under irrigation, and 1·1 million more kilowatts of generating capacity. These results would do little more than hold the existing standard of living of the increasing population, but the way would be prepared for an accelerated programme of development.

The population of the area is already 600 million: one quarter of the population of the world, or four times the population of the U.S.A. and three times that of the Soviet Union. It is growing at such a rate that in twenty years the increase in population alone will equal the present population of the United States and Canada. This is the measure of the problems facing the world in the area. The threat of famine is ever present over most of the area. The average national income for each person of over £200 per year in the United Kingdom and Australia, shrinks to £20 per year in South and South-East Asia. In the rationed urban areas of India, the average daily diet consists of twelve ounces of cereal, mostly rice, and in spite of extremes of climate, the average Indian and Pakistani has no more than nine to ten yards of cotton cloth to clothe himself throughout the year. The problem is to develop the under-developed countries in order that their output may grow at least as fast as their population, and indeed faster.

The Colombo Plan for Co-operative Economic Development in South and South-East Asia (to give the Plan its full title) had its origin in the meeting in Colombo of Commonwealth Foreign Ministers in January 1950, when views on world problems—and particularly on the needs of the countries of South and South-East Asia—were exchanged. A ministerial consultative committee was set up to survey the needs of the area; to assess resources available and required; to focus world attention on the development problems of the area, and to provide the framework for an international co-operative effort to raise living standards. The original members were the Commonwealth countries of the area, Ceylon, India, and Pakistan, together with Australia, Canada, New Zealand, and the United Kingdom, Malaya, and British Borneo.

Up to a Sydney meeting in May 1950, the meetings were attended by representatives of the Commonwealth countries only; but it was contemplated from the beginning that all countries in the area should be invited to participate in the Plan on equal terms. This led to an extension of the membership. Shortly after a London meeting in September 1950, Viet-Nam, Cambodia, and Laos became full members, while Burma and Nepal attended the Karachi meeting of the Consultative Committee in 1952 as full members, and Indonesia joined the Plan in 1953. From 1950, the United States has associated itself with the other members of the committee and has attended as a full member the Colombo 1951, the Karachi 1952, and the Delhi 1953 meetings. The World Bank has maintained

close liaison with the committee in its work. Thailand sent observers to the London and subsequent meetings, while the Philippines had observers at the Colombo and Karachi meetings.

Need for Capital

Whilst the prices of raw materials for export have continually fallen since 1950–51, and import prices have fallen little, nearly all the countries managed to spend more on development in 1952–3 than they spent in 1951–2.

The urgent need is to produce more food to feed the people and to pay for imports. This can best be done by increasing yields from land already under cultivation, but new land can also be opened up, at a greater cost, by irrigation, reclamation, or flood control. To increase the yields of the present land requires less capital but it is a desperately hard educational task. The cultivators have to be patiently taught how to use fertilizers and how to control pests; they have to learn to replace present varieties of crops by improved varieties and to breed better animals. To do this means widespread agricultural extension and demonstration farms and more and better agricultural schools. Ultimately, new techniques are assimilated only in so far as the whole of society is transformed, and this obviously cannot be brought about in a day. Technological progress is a slow, cumulative process. Underlying modern Western technology is a long scientific tradition founded on the Western concept of nature, which fosters a spirit of exploration, discovery, and experimentation. The tens of thousands of cultivators will become receptive to new techniques only in so far as the social atmosphere and the basic social and economic institutions are such as to stimulate incentive and initiative.

The opening up of new land and the marketing of more food also demand means of communication and increased supplies of power, These, together with agriculture, have, as planned, absorbed most of the efforts of the countries under the Plan. Less money has been spent on social welfare projects such as health, education, and housing. The amount of money spent on welfare depends on the size of a country's national income, although something could be done in these essentially feudal countries by a more equal distribution of wealth. Developmental measures which lead to increased output will enable more to be devoted to education and facilitate the growth of social capital, the source of social welfare.

The 1953 report shows that in agriculture 3·5 million acres of land in India have benefited by irrigation works, and the production of food has increased by nearly 5 million tons; Ceylon opened up 40,000 acres of irrigable land; Pakistan added 400,000 acres to the cultivated area and made progress with her irrigation works in spite of a severe drought. So much has been done under the Plan, but a great deal remains. Co-operative efforts under the Plan have un-

doubtedly drawn the countries together, and by encouragement and support, famine and despair have been warded off. Nevertheless, the standard of living is, in face of the rapidly increasing population, only being held just short of famine and starvation in these deprived areas. The countries need more finance and more capital aid; the urgency of mobilizing more foreign capital can hardly be over-emphasized. Although there are limits to the capacity of under-developed countries to absorb capital, they need larger sums than at present being invested. For, after some false starts, most have now built up the organization necessary for development.

Technical Co-operation

The countries also need more trained men, but here progress has been greater. The men are being provided under the Technical Co-operation side of the Plan. Under this scheme, the Commonwealth Governments participating in the Plan agreed to provide technical assistance to the value of £8 million and the countries of the area co-operate fully in arrangements under the scheme.

Technical co-operation takes three forms: first, the training abroad of the area's young men and women when this training (usually post-graduate) cannot be obtained at home; second, the provision of experts to advise on the economic development programmes—the growing of more food, the construction of dams and better communications, and the development of small industries—third, to help build up training institutes or schools and colleges within the countries of the area, with the Plan providing training equipment for the training institutes, schools and colleges. Sometimes the expert both advises on new techniques and trains young men and women to carry on these techniques when he has gone.

Technical co-operation has been one of the successes of the Plan. The Commonwealth countries have placed all their resources at the disposal of the countries of the area, and this has saved much time and prevented many mistakes in the choosing of experts or the placing of trainees abroad. They have built up small but valuable Colombo Plan organizations in the countries to facilitate the scheme.

During 1952–3, the flow of technical co-operation cut wider and deeper. The number of requests for assistance increased as more countries like Indonesia came into the Plan, while the economic development programmes of the other member countries like Burma got under way. This increase in technical co-operation led to a better balance between training abroad and training at home, as more training centres were constructed in the area. It also made for a close relationship between the capital development and the technical co-operation sides of the scheme. As pointed out by the 1953 Report of the Council for Technical Co-operation, the main emphasis must, in the short run, be on plans which will result in increased production in the shortest possible time, and for this purpose some

countries have placed a good deal of reliance on experience and techniques which are at present available only from abroad. From a longer point of view, the countries of the region intend to develop facilities for training more of their own technicians of all grades from the mechanic and the agricultural extension worker to the university professor and the soil scientist. There will always be room for exchanges of experts and trainees, as there is and always has been between even the most highly developed countries. Medium- and lower-grade technicians in every branch of industry and administration (whose role is just as important as that of the qualified professional men and who will be needed in millions rather than thousands) can be trained only in their own countries. Consequently technical co-operation funds have been used to establish and equip training institutions or to develop training on the job in the projects in the countries of the region. It takes time to develop institutions of this kind, but unless the task is attended to urgently some of the projects now being started may wither away owing to lack of trained men of all kinds. The development of training institutions within the area is something to which all the technical assistance organizations can contribute, and the Technical Co-operation Scheme has a special part to play in the provision of equipment.

The basic concept of the Colombo Plan has been co-operation, with each member country doing what it can to assist in the development of the areas as a whole. Acting in this spirit, Ceylon, India, Malaya, and Pakistan are joining the other donor countries offering facilities for training in their countries, and the possibility of extending these facilities within the area is being considered by the several governments. Since the development schemes in operation in any particular country of the region are likely to be repeated elsewhere with certain modifications, the planners, managers, engineers, and trainees can often learn more from such a project actually being carried out in the area than from a completed project in an already developed country, where conditions may differ from those of the region and where more emphasis has to be put on replacing men by machines. Further, the technical co-operation activities under the Colombo Plan are administered in the closest co-operation with complementary activities under the United Nations technical assistance programmes and the similar U.S.A. plans. Both the United Nations and U.S.A. have liaison officers with the Council for Technical Co-operation at Colombo.

National Efforts

Some people have the impression that without foreign assistance under the Plan the economies of the member countries would be stagnating. This is far from true. A good example is the Gal Oya Scheme in Ceylon. On the east coast of Ceylon there was a remote stretch of jungle inhabited by elephant, bear, and leopard and by

other wild animals and a few backward people. The river which drains the area dries up in the off-season, but when the rains come it rushes down in a torrent, like the rivers of so many areas of monsoon Asia. The valley is flooded and the country devastated. On achieving independence in 1948, the Government of Ceylon decided on the multi-purpose (irrigation, hydro-electric, and later industrial) Gal Oya Valley project. To conserve the head-waters of the river, a huge earthen dam has been thrown across the river, forming a reservoir or large artificial lake from the flood water as it flows down the hills. Under the shadow of the dam a power station has been built which will have an ultimate output of 10,000 kilowatts. The project is now part of the Ceylon Government's development programme within the Colombo Plan. The contract for building the head works, given to a United States contractor and paid for by the Ceylon Government, was completed in eighteen months. A public corporation, the Gal Oya Development Board, was established and financed by the government to dig canals for irrigation, clear the jungle, prepare land for agriculture, and build the houses and community buildings to settle the new colonists. In about ten years about 252,000 people will have been settled on 250,000 acres of land. The responsibility for planning and execution falls on the Ceylon Government, and they will have to find nearly all the money and labour, but much help is coming from outside. The Canadian Government, as part of its contribution to the Colombo Plan, has provided the transmission system for the electric power. The Australian Government has given a number of tractors. Under United Nations technical assistance and under the Colombo Plan, Australians, Dutchmen, Englishmen, Canadians, South Africans, Americans, and Scotsmen are working side by side with Ceylonese. For example, the United Nations Food and Agricultural Organization has provided soil and crop experts and some mechanical engineers to take charge of the motor transport and heavy earth-moving equipment and the corporation's workshops, while irrigation engineers and other technicians have been provided under the Colombo Plan Technical Co-operation Scheme.

This is the pattern of development in South and South-East Asia. The planning and by far the greater part of the resources needed to carry out the Plan comes from the Asian countries themselves. The other countries are co-operating in what is already a going concern. Without this co-operation it would still go on, although progress would be slower and more difficult. A great deal has been done, but not enough, and the public must be awakened more sharply to the needs of the countries of the area. The £350 million which has been attracted to the area during the operation of the Plan has been vital to the countries of the area, but it falls far short of the requirements.

A group of experts appointed by the Secretary-General of the United Nations has recommended a world development authority;

the proposal is now before the United Nations. The experts similarly recommended that the governments of South and South-East Asia should make clear to the people their determination to remove the obstacles to free and equal opportunities, which blunt incentives and discourage the efforts of their peoples. Some of these obstacles are old land laws and practices, and privileges based on race, colour, caste, or creed; important positive needs are progressive taxation and programmes of mass education and community development such as those of India. Some day we shall have an international development authority (for which the Plan will have prepared the way) endowed with greater finance for capital development than the Colombo Plan has been able to provide, working in a fresher, healthier, more vital local environment.

P. W. E. Curtin.

CHAPTER FOUR

THE AMERICAN POINT FOUR PROGRAMME

PERHAPS the logical starting-place in trying to tell about the Point Four programme is to recall the three other points of President Truman's Inaugural Address of 1949. For most people seem to be like the character in the American musical comedy who answered to a question on Point Four: " Why, I don't even know Point Three."

In his Inaugural Address of January 20th, 1949, Harry S. Truman said:

> In the coming years, our programme for peace and freedom will emphasize four major courses of action.
>
> First, we will continue to give unfaltering support to the United Nations and related agencies, and we will continue to search for ways to strengthen their authority and increase their effectiveness. . .
>
> Second, we will continue our programmes for world economic recovery. .
>
> Third, we will strengthen freedom-loving nations against the dangers of aggression.
>
> Fourth, we must embark on a bold new programme for making the benefits of our scientific advances and industrial progress available for the improvement and growth of under-developed areas.

The President went on to say that although there were limits to the material resources which the nation could afford to use for assistance of other peoples, " our imponderable resources in technical knowledge are constantly growing and are inexhaustible."

Mr. Truman then called on his countrymen to share with peace-loving peoples the benefits of America's store of technical knowledge, and to co-operate in fostering capital investment in areas needing development. He called for the co-operation of American business, private capital, agriculture, and labour, and invited other countries to pool their technological resources in a " world-wide effort for the achievement of peace, plenty, and freedom."

Necessity, mother of the inventiveness of newspaper headline writers, capsuled all this into " Point Four ". And Point Four, without quotation marks, it has become around the world.

A few months after President Eisenhower's inauguration, word was passed around the State Department that the term " Point Four " should no longer be used. This was an understandable political reaction. But Point Four had become embedded in the languages of too many countries. It is " Punto Cuatro " in South

America, "Dot Four" in Pakistan, and the "Fourth Spot" in Jordan. In India the English sounds are written in Hindi. Wisely, the new administration dropped the subject.

President Truman called for a "bold new programme" in urging that the United States share its technical knowledge with the peoples of under-developed areas. The programme could be bold, but there was a question of how new was the sharing of abundance, even if in this case it was largely an abundance of knowledge. Bishop Fulton J. Sheen of Washington remarked that the first Point Four programme took place on the shore of the Sea of Galilee.

Certainly there has been a long record of the transplanting of technical knowledge or skills or capital from one country to another. It has been practised by religious missionaries. Trade and commerce have always meant some exchange of skills as well as goods. Settlement of the American colonies was financed by British and other companies looking for a return on business investments. Britain, Scotland, Sweden, and Holland put skills and capital into the development of American railroads, mining and milling, cattle ranching, and hydro-electric power.

More recently, American industry has brought higher levels of health, education, housing, and productivity along with industrial development to Venezuela, Arabia, Liberia, India, Brazil, and other countries.

When Point Four was started, the United States Government had been giving technical assistance for about seven years to Latin-America through the Institute of Inter-American Affairs, established during World War II, and on a smaller scale in Liberia and the Philippines. An Interdepartmental Committee on Scientific and Cultural Co-operation had been set up in 1940 to co-ordinate the sending of technical experts overseas.

What was new about Point Four, what distinguished it from earlier piecemeal ventures in technical assistance, was the fact that for the first time it became a part of the foreign policy of the United States, established by Act of Congress, financed from government revenues, and supported by the vast resources of the nation. For the programme was able to draw not only upon executive departments and bureaux, but through private contracts also upon the manpower, skills, and experience of private enterprise in the United States and other countries.

The Act for International Development, approved June 5th, 1950, authorized the President to carry on the programme and, under authority delegated to the Secretary of State, there was established a Technical Co-operation Administration (TCA) in the Department of State. In 1953, as part of a consolidation of foreign-aid programmes within a single executive agency, TCA was merged with the Office of the Director of Mutual Security, the Mutual Security

Agency, and the Institute of Inter-American Affairs into the Foreign Operations Administration (FOA).

One of the most remarkable things about Point Four has been its capacity to inspire support and enthusiasm from diverse groups and individuals. Point Four makes sense to businessmen, educators, religious workers, diplomats, politicians, professional people, and plain citizens who see in it the means of increasing commerce and sound foreign investment, advancing the growth of democratic institutions, and developing understanding and goodwill among nations—in an economical, effective, and peaceful way. The 'bold new programme' also made sense to other nations. The United Nations established a Technical Assistance Administration. The British Commonwealth launched the Colombo Plan for South and South-East Asia. Other European nations initiated smaller programmes. The people of recipient countries accepted Point Four as a way of working with integrity and self-respect to develop their resources free of exploitation.

This is not to say, of course, that Point Four has not had its critics and opponents—both at home and abroad.

Perhaps the reason for its general appeal is simply that Point Four does in fact contain what so many people see in it, although each may not be attracted by quite the same thing. For Point Four, endowed with a combination of idealism and hard-headed practicality, is accomplishing very practical, tangible things within mankind's humanitarian instincts.

This is inherent in Point Four as an idea. But a great deal of credit is due to those public servants who had original responsibility for developing technical assistance as an activity of government. Drawing upon experience in the Tennessee Valley and in Latin-America, they developed, from the philosophy of helping people to help themselves, a set of working principles which made it possible to give and receive assistance with mutual understanding and respect. They started with the rule that what was American was not necessarily right and good. They taught that technicians need not be ashamed to work with their hands.

They knew that to be lasting, technical assistance must draw its main impetus from the people themselves. Point Four sought to vitalize the human and natural resources within a country through modern technology and capital.

But they knew also that a people cannot advance themselves if they are hungry, sick, and illiterate. So Point Four attacked first the problems of food production, health, and education.

Although TCA's effort and funds went largely into bilateral programmes, its officers sought to keep it international in scope. TCA's

Administrators[1] knew the strength to be gained in working as closely as possible with the United Nations agencies, the Organization of American States, and other international bodies.

Although Point Four was a government programme, the participation of private corporations and foundations, universities, and individuals has been encouraged.

Point Four was shaped as a long-range programme. It promised no miracles. And despite early criticism that the programme was too small, the Administrators resisted what they considered excessive appropriations. They knew there were limits to the amount of money that could be usefully and efficiently absorbed in countries still struggling with the fundamentals of education, health, and food-supply.

Consistent with its long-range, gradual character, Point Four has been relatively a low-cost programme, though there have been pressures to use the agency as a vehicle for large-scale economic grants justified on emergency political and military grounds. TCA's officers opposed having Point Four become just another weapon against Communism.

On this subject, Dr. Bennett said:

> The Politburo could be wiped out overnight and only the immediate military threat to peace posed by Communist imperialism would vanish. There would still be world conflict.
>
> There would still be world conflict because there would still be mass poverty. The more misery in the soil, the more the seeds of armed conflict flourish.

Stanley Andrews said: " We are not fighting Communism. We are fighting the conditions that cause Communism."

In spite of this stand, at least partial success in using TCA for ' dollar diplomacy ' drew this Congressional rebuke in a staff report of the Senate Appropriations Committee:

> The original concept of the programme, the simple person-to-person sharing of United States skills and knowledge with other people to help them develop their own abilities and resources, appears to be merging with and being overshadowed by increasingly large grants in the form of special economic assistance to such countries as Iran, Israel, Pakistan, India, and Egypt. Identical personnel in the same missions are active in dispensing both technical assistance and economic aid; the line of demarcation between them is, at best, arbitrary. The line between technical assistance and outright economic assistance is in the same circumstance.[2]

[1] Dr. Henry Garland Bennett was Administrator of Technical Co-operation from December 1st, 1950, until his death in an aeroplane crash at Tehran on December 22nd, 1951. Jonathan B. Bingham, his Deputy, served as Acting Administrator until Stanley Andrews was appointed Administrator and served from May 1st, 1952, to August 31st, 1953.

[2] *International Development and Related Legislation,* report of the Investigations Division of the Senate Appropriations Committee, U.S. Congress, submitted January 23rd, 1954.

In its application, Point Four has been essentially a gigantic effort in mass education. This does not mean only classroom education. It means education in earning a living, in maintaining health, in raising a family, in contributing to community and national life. Point Four has helped to establish improved teaching techniques and institutions, to train teachers, and to a lesser extent, to provide equipment, through which a country could train its people.

Since self-help is the keynote of Point Four, the U.S. specialists emphasize self-help methods. Projects must be truly co-operative —co-operatively planned, administered, and financed—so that the people and their government will feel a sense of responsibility and participation. Technical assistance is fitted within economic and social programmes of the host government, which the people will later be able to finance and operate.

The host government must request U.S. assistance. A broad ' country agreement ' is then negotiated. Within this general agreement, more specific-project agreements are drawn for specialized activities in agriculture, maternal and child care, deep-well drilling, and the like. The participating country is required to contribute a ' fair share ' of the cost of the joint programme, although this may take the form of labour, services, and materials as well as funds.

Various techniques are used for achieving joint planning and execution. In some countries co-operative services or agencies, jointly staffed and administered by U.S. and local technicians, are set up as bureaux within ministries of the host government. These agencies are financed by contributions from the two governments to a common pool. Withdrawals can be made only upon agreement of the chief U.S. technician and the Minister concerned.

In other countries a joint fund may be established for the entire co-operative programme or for segments of it, even if no joint agency is set up. Or joint planning may be accomplished by committees including both host government officials and officers of the technical mission.

Co-ordination with the field workers of private and international agencies is a constant objective.

In its primary phase, Point Four concentrated heavily on individual projects in health, education, and agriculture. Other projects dealt with mineral resources, trade and industry, transportation, communication, and public works. A second phase is now unfolding—the village-development programme, which already affects thousands of villages and millions of people in India, Iran, Egypt, and Pakistan, and is taking form in other countries. Village development relates all the problems of a community into a single problem, integrates the forces for corrective action, and moves upward from the village and its people rather than downward from the Ministry.

Parallel with training by U.S. technicians in the countries,

advanced training is given to selected local officials and technicians in U.S. colleges or at regional training centres in Beirut, Cairo, Puerto Rico, and Manila. The regional centres approximate production and marketing conditions in the home countries.

In the early spring of 1954, the U.S. technical assistance programme had 1,850 technicians working overseas in forty-one countries. Some 3,300 nationals of the co-operating countries had received training in the United States and several hundred in the regional centres.

A technical assistance budget of approximately $130 million was requested for 1954–5, maintaining the level of funds provided since 1952. To date the United States has devoted about $489 million to its bilateral technical assistance programmes, and $45 million to the United Nations Technical Assistance Administration and the Organization of American States.

Because Point Four is a long-range, gradual programme attacking the basic problems of human existence, the work after more than four years still is only in its beginning.

But already the peoples of Latin America, the Near East, Africa, and South and South-East Asia know its beneficent hand. The incidence of malaria has been reduced from 89 per cent. to less than 10 per cent. in areas of Iran. Seven modern hospitals and eighteen health centres have been added to Brazil's health facilities. More than 180,000 persons have been treated for trachoma in Indo-China. Food production is up 27 per cent. above 1948 in Uruguay. Turkey has almost doubled her wheat production. Rice production is a million metric tons above pre-war in the Philippines. Agricultural colleges have been established in Iraq and Ethiopia. A technical institute is functioning in Thailand and teacher training centres are at work in Bolivia.

Those in Point Four know well that these accomplishments only scratch the surface of centuries of neglect, exploitation, and decline. They press ahead at the long task of helping hundreds of millions of the earth's people to achieve twentieth-century living.

In retrospect, it can be seen that Point Four suffered more than the normal tribulations of a new government agency—from changes among its top officials, from a split responsibility to the Secretary of State for operations and to the Director of Mutual Security for its fiscal budget, and in some degree from the reorganization into the present Foreign Operations Administration.

Under the reorganization, FOA and its officers have maintained the level of funds and personnel engaged in technical assistance. They have been energetic in calling on private organizations to join in extending technical assistance under contract.

Despite such support, many Americans are concerned that the

lumping of technical assistance into the economic-military support programmes has deprived the work of its distinguishing character, what might be called its ' Point Four appeal '.

Reflecting this concern, the staff report of the Senate Appropriations Committee, previously mentioned, had this to say:

> The technical assistance programme is showing a divergence from its originally intended pattern. . With large grants in the form of special economic assistance in some countries it would appear technical assistance may lose its identity and, therefore, its psychological benefit, if an effort is not made to keep it from being merged completely with large-scale grants made for economic purposes.

It must be conceded there is a danger that if Congress uses the broom on large-scale economic aid, Point Four—reduced to a technical phase of FOA operations—may be swept out as well. But those who grew up with Point Four are confident that in spite of a temporary submergence, its deep-rooted support from the American people and its own dynamic verity will bring a rebirth of this effort to " free ourselves and others from the evil tyranny of hunger, disease, and ignorance."

PAUL DUNCAN.

CHAPTER FIVE

EDUCATIONAL PLANNING IN ISRAEL

In building a new country and young state under the pressure of rapid growth, reliance cannot be placed exclusively on the free play of forces. The State of Israel has to-day a population of 1,688,000, 1,500,000 of them Jews, and 188,000 non-Jews. Some 650,000 Jewish settlers who had been in the country before the establishment of the Jewish state in 1948 and about 725,000 newcomers who have replaced the Arab refugees could not be formed into a united—if not uniform—nation with a large annual birth-rate solely on the principle of *laissez-faire*. And educational and economic-technical planning are interdependent. New immigrants should be distributed throughout the country according to a rational plan; they should not be allowed to follow their natural tendency of settling in the three larger towns—Tel-Aviv, Haifa, and Jerusalem—there only to form a '*Lumpenproletariat*'. Rather should an attempt be made to direct them into productive occupations and into those districts where they can both attain economic independence and contribute to the stabilization of the over-all economy of the country—that is to say, into abandoned Arab villages or into new settlements in such areas as the Negev desert or the Juda and Galilee mountains. Such planning will also be determined by security requirements, for large unsettled areas constitute the weakest links in the defence chain.

However, such measures cannot be enforced by law. Israel is not a totalitarian, but a democratic state. Nor is it possible to exert unlimited administrative pressure. Such pressure would always have to be supported by an appeal to the goodwill of the new settlers, who, if they are not to succumb to a feeling of isolation and if their constructive capacity is not to be weakened, need the support in their settlements of idealistic young people from the old-established sections of the population. Similarly, they require the help of agricultural and technical instructors, teachers, physicians, and nurses—most of whom come from the older sections of the population. A situation like this makes educational interaction between the two sections of the community necessary. This constitutes the core of the problem.

Areas of Educational Planning

The Schools

Prior to the establishment of the State of Israel, the Zionist educational system of Jewish Palestine was outwardly a private and intern-

ally a semi-official one. The compulsory education law prescribed by the mandatory authorities remained a mere impractical formality. However, illiteracy in the Jewish community was negligible in contrast to the Arab illiteracy rate. Moreover, the bulk of the financial burden was borne by the Jews through semi-voluntary contributions. The spontaneous nature of the educational system was reflected in the ramifications of the school system along ideological lines. Originally there were two main trends: one national and general in character, the other (from 1920 onwards) pronouncedly religious. Later, a socialist branch was added. Within the socialist and the religious sections there appeared further subdivisions according to the emphasis and radicalism of their respective outlooks. This led not only to a strengthening of parental influence but also to greater administrative complexity, fragmentation, an increased financial load, and a lowering of standards. In small communities, in particular, often two or three poor elementary schools instead of one good one would be found. In some cases this accentuated the gulf between the various social strata. What made matters worse was that these ideological schools were dependent on the political parties. The latter would nominate or propose to the Zionist Education Department school inspectors and superintendents. After the establishment of the state the idea of a comprehensive national state school gradually gained ground. It began to take shape with the passing of the compulsory education law in 1949. This law provides for three main types of state school, two of which—one general and the other religious—will cater for the Jewish majority. The religious school is as public as the general state school; it does not depend on any political party but is directly controlled by the Ministry, although by means of a special religious board. Attendance is compulsory from the age of 5 to 13+. In principle, the six-year elementary school is to be followed by a course of the junior high school type. However, most elementary schools still have eight forms. The matter is still under discussion, and practical experiments are in progress. New curricula have been drawn up and will be put into operation on an experimental basis for a two-year period beginning with the academic year 1954–5. Seventy-five per cent. of the content of these curricula is the same for all schools; the planning of the remaining 25 per cent. is left, within certain limits, to the discretion of the various types of school: ideological, vocational, regional, and so on.

The third main type is the Arab state elementary school. Here the medium of instruction is Arabic, Hebrew being a prescribed subject.

The law does not require children to be sent to one of the three types of state school; parents may choose to send them to private schools as, for example, those maintained by the extreme orthodox movement "*Agudath Yisrael*" or the Christian mission schools.

These latter are attended predominantly, but not exclusively, by Arabs. In as far as these private schools submit to ministerial supervision in matters of hygiene and administration (but not with regard to strictly pedagogical matters), the government finances 60 per cent. of their expenditure. The secondary schools and the two recognized institutions of university rank—the Hebrew University in Jerusalem and the Technical College in Haifa—as well as the Institute for Natural Science Research (Weitzmann Institute) in Rehovoth have so far succeeded in maintaining their essentially private character, although the percentage of government contributions to their budget has been increasing gradually. This trend is more noticeable in the institutions of higher education than in the secondary schools.

The Army

The young Israeli army is the largest institution of adult education in the country. This special function is due to the fact that a large number of recruits are recent immigrants from Oriental communities. In the army, the majority not only receive military and technical training but also become acquainted with basic principles of hygiene, European dress and its care, the Hebrew alphabet or indeed any alphabet, community living, European food habits, and so on. The army has had to print for a number of its soldiers a whole library of textbooks ranging from first readers to books on general and Jewish history, geography, Jewish culture, and the like. These textbooks stress general rather than specifically military education. However, there still remain a number of problems arising from the fact that such basic education has to be given in a military framework.

Officer selection has so far been independent of formal educational criteria. Officers, too, receive part of their further general education in institutions and courses run by the army.

Youth Immigration

The so-called youth *aliyah* is a unique organization for the purpose of fostering the immigration of Jewish youth into Israel and of promoting their educational and vocational assimilation. The youth *aliyah* was first planned in Germany in 1932; it was put into practice in 1934 and has since placed sixty thousand young people. At present twelve thousand young people are in its care. At the beginning the majority were of German-Jewish origin; then, with the spread of the Hitler regime, there was a growing number of immigrants from other European countries, and during the last few years the majority have come from North Africa. The educational programme has been and continues to be guided by three main principles: work, study, community living. At first, the work programme was purely agricultural, having as its aim the preparation for the socialist collective

settlements (*kibbutz* and *kvutzah*). Later, another type of settlement —the agricultural workers' co-operative (*moshav ovdim*)—was adopted side by side with these. In addition, the youth *aliyah* set up, or incorporated, a number of special educational institutions; in the main, boarding schools. The first trainees were mainly orphans or children whose parents had stayed behind in their countries of origin, so that the new educative forces could operate freely and unhampered. Since then the situation has changed fundamentally; the majority of parents are now living in the country. Changes have also taken place with regard to vocational training. In the past any agricultural work, specialized or not, was held up as an ideal, though it was not always a realizable one. However, increasing mechanization and the growing attraction exercised by the machine have greatly enhanced the importance of specialization, not only as a substitute for or supplement to agricultural training but in agricultural work itself. Only a fraction of those sixty thousand young people are at present engaged in agricultural work, but the contribution of this small group to the newly established communal settlements cannot be over-rated. The same ideological differences that are manifest in the organization of elementary education are also reflected in the various educational institutions maintained by the youth *aliyah*; here, however, co-operation between the different trends is particularly close and harmonious. An attempt has been made to deal with the problems peculiar to this province of education by means of a special body of inspectors, special curricula, teaching aids, and a pedagogical journal. Attachment of the organization to the Ministry of Education under conditions granting a high degree of educational autonomy has been considered recently.

Special Problems

The Newcomers

The majority of the new immigrants were not touched by the idea of Zionism, but were brought to the country by the combination of a number of compelling historical factors which was sometimes interpreted as a sign of Messianic providence. Whole Jewish communities in Yemen, Iraq, or Bulgaria were either transplanted to Israel in a body or migrated there in smaller groups. Strict traditionalism and a patriarchal tribal constitution place the Yemenite Jews to the right of the old-established Israeli population. Other groups as, for example, the Bulgarians—who, owing to their long exposure to the influence of the Soviet regime have lost part of their Jewish characteristics—may be considered to be left of the centre. Here the task is twofold: where the heritage of Judaism had been preserved within the immigrants' culture, consolidation is attempted; where this heritage had been lost, it needs to be revived. Thus we are faced with a tremendous educational problem demand-

ing the utmost effort and engaging the best elements in all camps regardless of political past or ideological affiliation. Their numbers, however, are far too small.

Yet another problem remains: nothing is more detrimental to human dignity and to political and social harmony than the coincidence of cultural and social disadvantage with the objective anthropological marks of ethnic identity. The Negro question in South Africa and, to a smaller extent, in North America, clearly prove this point. Every effort must be made to prevent such a situation from developing in Israel. This is particularly important in the case of immigrants from Arab countries who had assimilated to a large extent their former neighbours' mode of dress, their way of life (in so far as it was not determined by religious factors), and their primitive level of civilization. The journey to Israel (usually by air) bridged not only hundreds of miles but also thousands of years in the short space of a few hours. Men and women accustomed to the cultural patterns of early historical time suddenly found themselves in the middle of the most modern technological civilization. It is true that they are living mainly on the borders of this civilization, in advanced, uncomfortable, and often dangerous settlements wrought from deserts or mountains through hard work. Here it is up to the old-established groups to beware of an attitude of false superiority towards the so-called primitiveness of the newcomers. They should, on the contrary, remember that the primary meaning of the term is not backwardness but primordiality, that is, originality. Only if the civilized educator is prepared to learn from the more organic culture of the new immigrants at the same time as he passes on to them his ideological and technological knowledge, can a truly educative relationship of give and take develop. Only then, too, can the newcomers be prevented from relapsing into Levantinism. Such a relapse would be inevitable if events were allowed to widen the natural thirty-year gap between generations into a distance of many hundreds of years. The emergence of such a gulf would not only involve the loss of religious and cultural values, but it would also endanger moral standards, which among primitive peoples are very often closely linked with tribal traditions. This poses the problem of how to fight one aspect of the concept of primitiveness, namely that implying technological backwardness, without destroying the other, that of being well-rooted in the cultural soil. This problem cannot be fully solved; but the very awareness of its existence and the will to master it will help educators to avoid the worst pitfalls: that of unwarranted superiority in particular.

The Arab Minority

The Arab population within the boundaries of the Israeli State has shrunk from 790,000 to 188,000. In comparison with the mandatory period, the percentage of Arab children attending school has

risen enormously, even though it has not yet been possible fully to enforce the compulsory education laws. (Neither have all Jewish groups complied with these laws.) There are, however, qualitative considerations which are hardly less important. What are the educational aims of the young Arab in Israel? Should he strive to assimilate the Jewish culture or should he attempt to realize a national Arab culture without, however, jeopardizing his loyalty to the state? This question is being discussed not only by Jewish political philosophers attempting to promote the integration of the Arab minority but also by young Arab intellectuals; especially by the small but growing number of Arab students in the university and the technical college. One of these, a young law student and, characteristically, a Druse, has just published the first Arabic book to be produced in Israel since the establishment of the state six years ago. It deals with the question of "How is Israel governed?" and contains a general introduction into the nature of the state and a discussion of various constitutional forms.

The Israeli Arabs' economic status, although not always satisfactory, is frequently much superior to that of the Jewish immigrants. However, an economic well-being which fails to bring with it the possibility of full political and cultural expression may easily turn into a revolutionary factor. Since nobody is capable of, or interested in, reversing the process of economic development, the balance must be sought in cultural advancement.

The Limitations of Planning

Any liberal state that is neither totalitarian nor radical is faced with the question of the role of freedom in a partially planned society. This applies to Israel. In the educational sphere the question presents a moral as well as a factual aspect. As has already been pointed out, the secondary and higher educational system is still largely free from planning. The moral problem lies in the preservation of academic and religious freedom for professional and non-professional groups, for Jews and non-Jews, for the orthodox and for free-thinkers. The desire to preserve such liberties exists not only in the government but also among the overwhelming majority of the people. It acts as a beneficial and necessary check on planning and keeps it within democratic limits.

Under the heading "Planning for Freedom", Karl Mannheim has attempted to solve a yet deeper antithesis of any planning. Even the best-planned machine cannot function permanently without the creative initiative of free incentives. It is for this reason that human society can never be made to work with the precision of a machine. It requires a more flexible organization so as to be able to meet unforeseen dangers and take advantage of new opportunities. But this becomes impossible if those in charge of the planning are too closely and directly concerned with immediate programmes.

Productive planning for the future involves a certain detachment from the requirements of the present.

If we apply Mannheim's basic idea to our problem, the following conclusions are reached: The strongest single factor in the colonization—in particular agricultural colonization—of Israel has been the *chalutziuth*, the social and national pioneer movement. It created the collective and co-operative workers' communities and ensured their success in spite of severe crises. To-day the *chalutziuth* movement is clearly on the decrease; although essential for the success of any plan, it cannot itself be planned. It represents that moral surplus which acts as a source of strength and enables people to choose the hard life. The great mass of new immigrants come to Israel in a state of moral impoverishment; they are unable to provide such a surplus. Their external circumstances do not at once improve upon their arrival in the country, but are at first exposed to new tribulations. A certain measure of economic hardship and political danger can bring about a moral strengthening, especially if there are reserves to be drawn upon; however, if that measure is over-reached and if there is no reservoir of moral strength, the satisfaction of the primary needs of life will take precedence over the willingness to put up with hardship for some ideal.

This accounts for the fact that to-day only about 13 per cent. of the Jewish population are engaged in agricultural work. Such a low proportion is certainly not sufficient. Only a very small percentage of new immigrants have joined the workers' collectives, partly because the communal way of life runs counter to their primitive conceptions and patriarchal traditions, and partly because it reminds them quite unjustly of the compulsory Communism of the Eastern countries from which many of them came. Both groups of immigrants, the Oriental as well as the Eastern European from the Soviet orbit, are experiencing great difficulties in accepting the idea of voluntary communal socialism which had been a characteristic feature of earlier efforts to colonize. Hence their preference for the more individualistic form of settlement, i.e. the co-operative.

This intensifies an educational problem of long standing. With the gradual fading of the old Jewish educational ideal of the *torah* (scriptures) scholar, the ideal of the pioneer became predominant for a few decades. Yet, its predominance was purely theoretical; even at that time only a few aspired to—let alone realized—it. At present, this minority has shrunk still further. Moreover, the serious political conflicts existing between the various *chalutz* (pioneer) groups over the question of pro- or anti-Soviet orientation in foreign policy have split the movement, in some cases even individual settlements, although these have little to do with the question of political Communism. This split reduces the weight and quality of the movement's impact and its pedagogical attractiveness. Finally, the regular and irregular fighting that preceded and followed the establish-

ment of Israel has given rise to new hero types such as the partisan or the soldier. Sometimes these figures fused with the pioneer ideal; in other cases, they existed side by side with it; and in a few instances they were even opposed to it.

What is needed, therefore, is a Zionist programme capable of attracting Jewish youth from those groups outside Israel whose economic and educational background will enable them to produce the moral surplus necessary for the growth of the *chalutziuth* idea. The concept of pioneering itself will have to be extended. Agricultural training continues to be an essential requirement. In addition, two new tasks present themselves: the integration of new immigrants and the reconciliation with the Arabs. These two great and positive aims may restore to the best elements among the Jewish people both in and outside the country that enthusiasm which gave birth to the Zionist movement and made colonization possible. This enthusiasm is the product of the unique synthesis between humanism and nationalism which has always been at the core of the manifold and historically determined manifestations of Judaism. Among the different kinds of humanism, the Jewish is surely the most religious; of the religions, it is perhaps the most humanistic. This characteristic feature of Jewish history must be reaffirmed in its present chapter which bears the title " Israel."

E. SIMON.

CHAPTER SIX

SEVEN-YEAR PLAN IN IRAN

IRAN emerged from the Second World War in desperate political and financial straits. The Russians occupied the north of Iran, as far south as a line east and west through Kasvin, and jointly occupied Teheran, the capital, with the British. The British held the south and central part of the country, as far north as the line through Kasvin, and thus controlled most of the railway network and all of the oil-producing area. It should be noted that while the United States did not at any time occupy Iran, approximately thirty thousand American military and civilian members of the Persian Gulf Command were stationed in Iran and operated the ports of Khorramshahr and Bandar Shahpur, the railways from the Gulf to Teheran, and certain of the main highways leading to the Russian Zone of Azerbaijan, under an agreement signed May 2nd, 1942.

The military occupation as a whole, and the fixed *rial* rate of the financial agreements (1942 and 1943) in particular, caused very great economic damage to Iran. Prices rose with the drain of goods from the bazaars, and with the depreciation of the value of the *rial*.[1] In a matter of months the country was in a state of uncontrolled inflation. There were virtually no civilian imports, because of lack of shipping and port priorities in the face of the enormous tonnage of material that had to be moved to Russia under Lend-Lease. Within the country there was very little movement of domestically produced goods, because of the Allied monopoly of the railways and truck facilities for priority Lend-Lease goods. Few outside goods came in, and even the small amount locally produced could not be shipped to markets. Yet the purchasing power of the permanent and occupation population of Iran skyrocketed, and what few domestic goods remained were siphoned off by the disproportionate purchasing power of occupation troops and Iranians employed by the military forces. In four years the cost of living rose from 154 to 1,108 on the 1936–9 index. And with the lowered prestige of the Iranian Government, the collection of Iranian taxes dropped, the national debt proportionately rose, nearly doubling in the first year of the occupation.

There were attempts made to check this inflation. The Anglo-Iranian Oil Company paid future oil royalties. A long series of missions arrived from England and the United States to attempt to

[1] Approximately £1 = 2·8 dollars = 90 *rials*. (In 1942, 130 *rials* = £1.)

increase the internal efficiency of the Iranian Government and its various agencies. Among them, a State Department-sponsored American Financial Mission, popularly known as the Millspaugh Mission because it was headed by Dr. Arthur C. Millspaugh, an American economist who had previously worked in Iran, arrived to establish a system of price controls, rationing, and monetary reforms in the banking and tax system. None was notably successful, and Dr. Millspaugh ultimately resigned.[2]

The end of the war hardly lessened, and in some ways increased, the difficulties of the Iranian Government. At least four major problems developed. The first was political.

Under the provisions of the treaty of January 1942, both England and Russia were to withdraw within six months. Russia continued to hold Azerbaijan. In September 1944 a Russian delegation came to Teheran to demand an oil concession and an economic monopoly in northern Iran covering about 216,000 square miles. A period of extreme instability of government followed, accompanied by successive falls of Iranian Cabinets, a demonstration by the Iranian *Tudeh* Party against its government because it would not grant the monopoly to Russia. A law was passed in December 1944 by the *Majless* (Lower House of Parliament) forbidding any government official to negotiate with the officials of any country on the subject of oil. In December the following year, 1945, the National Government of Azerbaijan was announced by the Russian authorities, and headed by Jaafar Pishevari. When all other means had been exhausted without success, Iran appealed to the Security Council of the United Nations. Finally, in November 1946 Russia acceded to most of the demands of the Security Council at its New York meeting. Two weeks later, Iranian troops entered Tabriz to find all Russian troops gone, the Azerbaijan army dispersed, and Pishevari again in exile in Russia.

The political instability caused by this major political problem would have been quite enough to reduce the country to near-chaos. But the ending of the military occupation had financial repercussions that intensified the economic strains of war-time inflation. The Russians left without making good on the major part of their fiscal commitments. The British left on the final day of the extended period of the occupation (March 1946) and met all the terms of their agreement—although they did impose certain currency restrictions on sterling payments. In addition they had imported 93,000 tons of wheat in 1941–2 to feed the Iranian civil population and to replace that taken by Russia. The United States evacuated its personnel by January 1946, and abandoned to the Iranians 60,777,000 dollars' worth of installations. They paid Iran all the railway tolls that Russia owed, so that the Iranian Government would not have to

[2] Arthur C. Millspaugh, *Americans in Persia* (Washington: Brookings Institute), *c.* 1946.

sustain this loss, and perhaps mistakenly blame the Americans who had actually operated the railway system. They also sold all removable material to UNRRA and turned the money, amounting to some 27,000,000 dollars, over to Iran. These credits and physical properties were welcome, but completely inadequate to check the inflation, or to place the nation again on a sound fiscal basis.

This second great problem was intensified by certain characteristics of the Iranian economy, which had long been unhealthy. It was very nearly a single-product economy, with oil revenues amounting to nearly 85 per cent. of foreign credits. There was a very inequitable distribution of wealth, with a tiny, almost infinitesimal wealthy class controlling the majority of land and water, and a vast and desperately poor general population. There was only the beginning of a middle class, important in the commerce of the cities and in government service, but economically impotent. There was a very unbalanced import-export trade, with virtually no domestic manufacture of capital or consumer goods. There was widespread unemployment, in part caused by the breakdown of the normal economy, in part by the urbanization of peasant and nomadic populations during Reza Shah's experiments in industrialization, and in part by the setting adrift of semi-skilled workmen who had been used in the occupation and in the shipment of Lend-Lease goods. Everywhere there was a fear of political instability, a spirit of gambling, an insistence upon amortization of any loan within a matter of weeks or months. And by European or American standards, there was widespread managerial inefficiency, with obsolete accountancy, lack of research, general inadequacy of maintenance, and a great shortage of skilled labour.

Two other great problems should be mentioned. One was political and social in nature: the breakdown of effective Iranian leadership, including governmental. The public lost confidence in their officials. Cabinet crisis followed cabinet crisis, and the average length of tenure was approximately five months. Dishonesty in high places was openly charged and generally conceded. During the second year of the Plan, for example, when the Shah appointed a presumably disinterested committee to investigate graft and abuses in government positions, the committee returned a report which branded members of both houses of Parliament, the Cabinet, the Plan Commission, and even certain members of the committee itself as being morally unsuitable for public office. Obviously morale among the rank and file of government employees was extremely low. Salaries were so low that it was openly stated that a mild degree of graft had to be countenanced in order to permit the lower employees and officials to survive.

The other of these problems was strategic. Iran had existed for centuries as a weak power between two great ones: Russia to the north and Great Britain to the south. Iran's oil, during and follow-

ing the war one of the most important sources in the world, had for nearly half a century been the subject of continuous international friction. With the growing tensions of the cold war, the exploitation of Iranian oil became crucial. Iran had to export oil, if it were to survive economically. Its leaders could hardly fail to realize that the market to which its oil was sent would determine in a major degree its political allegiance. The solution of the Azerbaijan problem in the United Nations had already heavily weighted the decision, and the existing oil agreement was still in effect, but most Iranian officials feared to render themselves too dependent upon a single foreign market. They hoped, perhaps unrealistically, to introduce some third power into the strategic scene, and used the prospect of oil as an incentive.

The Philosophy, Mechanism, and Techniques

The basic motive which led to the establishment of the Seven-Year Plan is very difficult to assess. Officially it was ". to raise the standard of living of the Iranian people through increased productivity", as is stated in the Law creating the Seven-Year Plan, passed by the *Majless* in February 1949. But its critics have alleged many other, and less altruistic, reasons. Some have claimed it was a manoeuvre by American capitalists to seize the Iranian market. Others have claimed it was no more than an imposing brochure designed to win an important loan from the International Bank. Others have charged that it was an attempt by the Director of the Bank *Melli,* who had been largely responsible for the withdrawal of Dr. Millspaugh and the termination of his mission, to divert public attention from the continued economic chaos in the country. Still others have said it was an attempt by Iranian landowners to make huge profits through the appreciation of their holdings by grandiose hydro-electric and irrigation projects, financed abroad. All of these charges were made in the Iranian Press, and in addition hysterical attacks upon the good faith, technical efficiency, and even personal morality of the individuals who were connected with the Plan. The writer would personally reject the above criticisms as being politically inspired and wholly irresponsible. But a social climate which produced such criticisms is not unimportant, and was to play a very major part in the failure of the Plan.

Certain facts are clear and easy to establish. In 1948 an American engineering firm, the Morrison-Knudson International Company, was invited to make an economic survey and present a plan for economic development. Both the time for the study and the number of men engaged on it were so severely limited by the terms of the contract, however, that the finished study inevitably had certain shortcomings, many of them minor but sufficient to give its critics grounds for discrediting the whole work. A few confidential copies only were delivered to the Bank *Melli* in Iran, the plan was rejected

by two or three top officials of the Plan, and the remainder of the copies were suppressed. Meanwhile, however, the Plan had been publicly announced and great popular pressure was being brought on the officials to announce projects and begin work. The Iranian Ambassador to the United States was referred by the Department of State to an organization known as the Overseas Consultants, Inc. (OCI), composed of eleven major American engineering and economic consulting firms. This firm was approached, sent five of its board members to Iran in late 1948 to make an initial survey, known as Phase I, and concluded a contract with the Iranian Government on February 1st, 1949, to send a mission of technical experts to Iran to make a survey and submit a recommendation for the projects, budget, and time-schedule of the Seven-Year Plan of Economic Development. A major British engineering firm with long experience in Iran was invited to become an associate of the OCI for the duration of this mission. The first members of the forty-eight-man mission flew to Iran in January 1949 in anticipation of the final contract. This was the beginning of Phase II, or the Planning Phase of the Plan. The British firm made no contribution to the educational aspects of the OCI Plan, but largely restricted its activities to the development of the country's water resources.

There can be no reasonable doubt of the absolute sincerity of the OCI, both its board and the members of its mission. Two clauses of the contract are extremely significant. One was an escape clause, that provided that either party might at any time unilaterally terminate the contract for any reason: since effective co-operation could come only from complete and mutual confidence between client and consultant. The second was that a major emphasis should be placed on public health and education, rather than restricting the Plan to purely engineering and agricultural projects: on the grounds that technical development could succeed only if accompanied by basic social reforms. The fee paid to the OCI, while a considerable sum in the economy of Iran, was far too small to be any incentive to the member firms. Yet the instructions given to the individual members of the mission were that no expense and no effort were to be spared in ensuring the success of the Plan. The leaders of the member firms considered the contract to be a great social experiment to determine whether the most advanced Western technology, extended in all good faith, could substantially raise the standard of living of the people of a technologically under-developed nation. They believed that it could, and were prepared to do everything in their power to prove their thesis.

Because the member firms of the OCI could not supply from their own staffs men of the highest calibre in certain of the technical areas, they employed consultants from some of America's greatest universities. The consultant on education, for example, was temporarily loaned by Teachers College, Columbia University. Despite the

irresponsible attacks of uninformed and politically inspired critics in Asia, it is doubtful if a more distinguished group of experts could have been assembled by any agency. Certainly in this regard the Seven-Year Plan offered an opportunity for testing the philosophy of technical assistance under better conditions than have existed in any major plan in recent years. They worked with Iranian counterparts, organized in a shadow organization that matched that of the American group, who were presumably the most able technicians available in that country, almost without exception mature and experienced men educated in European or American universities.

The American and British consultants, members of the OCI mission, were not charged with developing a basic philosophy of the Plan. This was presumably determined in broad policy by the *Majless* and by the Iranian Plan Commission by its detailed policy with regard to the allocation of funds to certain areas of endeavour. This is most important, for it barred the foreign advisers from seriously assessing the fundamental bases of the Plan itself. It was only within the limits of developing a specific programme within predetermined budget limits for each of the assigned areas of development [3] that the foreign advisers were given free reign. And the plans which they developed were not binding, but merely a recommended blue-print of technically possible and economically desirable projects to be undertaken in each area. They could be accepted or rejected at will by the Plan Commission, and even if accepted were subject to the vicissitudes of the practical process of local interpretation and implementation.

When the OCI mission arrived, the Plan Commission had already been planning certain projects in anticipation of the arrival of the foreign advisers. There was clearly present a very hazy basic philosophy of technical assistance, and widely divergent opinions as to appropriate policy to be followed in detailed projects. Thus, the Iranian Commission was badly divided as to whether the Plan should be directed towards a basic industrialization of the country with major engineering projects, or towards a modest up-grading of the efficiency of existing techniques in agriculture and local industry. Little or no thought had been given to questions of the impact of the nearly six hundred and fifty million dollars on Iranian economy, nor to the impact of sweeping technological changes upon the mores and social structure of the country. No thought had been given to the effect of the Plan on the semi-nomadic tribes of the country, representing about 22 per cent. of its population, nor upon the status of women in a predominantly Shi-ite Muslim society. Such extremely

[3] The budget allocated to education was 1,000 million *rials*, approximately 5 per cent. of the 21,000 million *rials* anticipated for the entire Seven-Year Plan. (*Note*: Official exchange was 32·5 *rials* : 1 U.S. dollar, but the free-market exchange has slowly deteriorated from 60 *rials* to 90 *rials* for the dollar.)

complicated and religiously sensitive questions as the legal status of the Pius Foundations, or perpetual trust funds established under unassailable Muslim and economical law, had not been considered at all. No law of eminent domain existed, nor appeared legally possible, in view of the Pius Foundation, yet the Commission was preparing to embark upon enormous construction projects which would entail extensive transfers of land.

In education there existed two widely divergent viewpoints as to the expenditure of funds. One held that only the cultural continuity of Iran had survived its six thousand years of history, and that therefore the most important educational objective would be to preserve this historic culture, to repair ancient monuments, to invest in the historical treasures of the country, and to build up the traditional spirit of their culture. As an example, it was proposed that an ancient bridge, of the Saffavid Dynasty, which was rapidly deteriorating through the pounding of heavy trucks, should be restored and preserved, while by-passed by a modern bridge. An opposing viewpoint held that the educational budget should be devoted to training a large number of semi-skilled workmen to meet the immediate demands of the proposed industry and to increase the yield of the existing village-type agricultural community. In addition to these two views on the Plan Commission, there was a powerful dissident voice in the various Ministries of the Government, who looked upon the Plan Commission as an unnecessary duplication of their existing organizations—a sort of government within a government—and proposed that they take over the funds of the Plan and expend them through their normal channels.

The OCI proposed an educational policy, which was accepted by the Plan Commission, and which fell somewhere between these two extremes. The OCI argued that the basic Law authorized the expenditure of the funds for the increase of production, on the assumption that the benefits of this increased production would ultimately filter down to the common people of the country in the form of an improved material standard of living. Nothing was officially said about the problem of an equitable distribution of these benefits, but in point of fact the foreign consultants never lost sight of this factor and deliberately proposed projects which would offer the best chance of equitably reaching the common people. The OCI educational policy was to apply funds to those educational processes wherever there seemed a real chance that it would substantially increase productivity of wealth in a reasonably short period of time; to apply these funds only so long as the project fitted into the basic educational pattern of the country and was not a transitory one with little permanent or residual value; and to apply funds so long as it directly raised the living standards of the people.

Almost immediately it became clear that five basic problems were involved: the alteration of the existing educational philosophy; the

modification of certain basic social attitudes; the alteration of the economic structure of the country; the training of necessary skills and crafts for the proposed programme; and the improvement of efficiency in the educational process itself. These five basic problems presupposed nothing less than a fundamental social revolution. What the foreign consultants repeatedly pointed out, but the Plan Commission and general Iranian public was never willing to accept, was that this involved very deep and irrevocable moral choices. The real question was: Are the Iranian people and their leaders willing to pay the *social* price of the technological reforms they advocate?

The existing educational philosophy was an extreme form of the traditional French model. There was extreme centralization of authority; a policy of ruthlessly discarding all candidates who were unable to meet certain highly formal examination requirements; the creation of a tiny intellectual *élite* with great social status and political power; and the imposition of an impossibly extensive and erudite required curriculum. The OCI maintained that a modern technological society could not be based on such an educational philosophy; and recommended that it be changed to one of decentralized administration to tap widespread experience and give local practice in leadership; that it have as its objective a mass education rather than that of an *élite*; that it conserve talent rather than discard partially qualified people through its examination system; that it teach a set of highly practical skills and attitudes rather than traditional theory and verbalism.

The educational study, carried out in preparation of the recommendations, had four characteristics. It was fundamentally a sociological investigation, to determine the pattern of religious customs, problems of language, organization of commerce and industry, tribal customs and nomadic patterns, family organization, and, of course, existing educational patterns, both formal and incidental. The study was carried out by a sampling process, with each of the *Ostans* (or military provinces), *Shahrestans,* major cities, and typical villages and tribes studied. It was a process of direct investigation, as it was soon discovered that no sources of information could be trusted unless they were personally verified, and cross-checked with a number of other sources. This point cannot be over-emphasized. With the best intentions in the world, both Iranian and foreign sources were simply incapable of supplying trustworthy information of any but the most rudimentary sort. Finally, the investigational process itself was utilized as a step in the ultimate process of implementing the Plan. The investigation prepared local councils and officials to accept and participate in Phase III, or Implementation of the Plan. They had been awakened to problems they had not known existed, and possible solutions had been suggested through their participation in the investigation and planning.

Once the educational study had been completed, and in fact

during the latter part of its process, the formulation of recommendations took place. Planning is not a pure science, perhaps not a science at all. It is more akin to the creation of a work of art. It represents one possible solution to a set of historical problems, but certainly not the only one. It is, in effect, the synthesis of a large number of small solutions to individual problems, formed into a consistent and interlocking whole. This synthesis can be the creation of a single man—a philosopher—or the product of a group of people who individually contribute, and corporately accept or eliminate. The data on which their decisions are based will, if they are honestly gathered, serve them or any other group equally well. The techniques they use will, in general, be ones tested in practice and generally acceptable to any educator. But their plan, their recommendations, will be inevitably a personalized matter, better or worse than that of another individual or group depending upon their skill, their experience, and the freshness of their creativity. It was so in Iran.

The Recommended Projects

The *Report on the Seven-Year Development Plan,* submitted to the Shah of Iran in the autumn of 1949 by Overseas Consultants, Inc., was a monumental document in five volumes. It contained hundreds of recommendations dealing with scores of projects in the areas of law, finance, communications, transportation, power, industry, agriculture, public health, and education. There were, in fact, few areas of the social and economic organization of Iran which were not considered. All these projects, in a certain sense, were educational in character, since they proposed specific changes in the employment, habits, attitudes, skills, and mores of the people. In the area specifically dealing with education, nine projects were recommended: the establishment of basic research and educational services; the development of women's education; the decentralization of educational control; agricultural training; technical training; tribal education; the overseas training of Iranian technicians; a programme of incentives; and the preparation of adequate teachers.

Certain of these projects were no more than the obvious application to the Iranian scene of widely accepted educational techniques which would improve the internal efficiency of the educational system. Thus, for example, the programme of teacher training included summer-school classes, improved normal schools, the establishment of social and financial incentives to enter the teaching profession, expert supervision and guidance, and other traditional practices of Western schools. The development of a programme of incentives was an attempt to encourage local effort, and reverse the pronounced trend in Iran to look to the Federal Government for all social action, by establishing prizes to encourage creativeness, and matching funds to encourage this local initiative.

A similar adaptation was made of well-tried foreign methods to

the problem of securing adequate information on which to base educational policy. Iran had no adequate source of educational data. The Ministry of Education could not assemble even the crudest of budgetary figures. Whole *Ostans* had only the vaguest approximation to enrolment and attendance statistics. Cost analysis was completely impossible, from the individual school to the national system, because of primitive accounting systems. There did not exist any standardized psychological tests or testing service: although a modest beginning had been made by certain individual scholars. The whole field of guidance was unknown except to a few foreign-trained educators. No population studies worthy of the name existed. The *Farsi* language and its Arabic script had been studied only desultorily, and there did not exist the basic research on frequency of word usage, semantic counts, spelling lists, orthographic studies, and phonemic analysis which are considered basic to modern textbook preparation. Obviously, if the educational future of Iran were to be based on anything but individual whims, a systematic start had to be made in basic research and educational services.

One of the most disconcerting facts in the Iranian society was the 'disappearance' of fourteen thousand foreign-trained university graduates. Their training abroad represented a huge educational investment, both in the actual cost of their schooling and in the time lost to productive employment. They had returned to Iran, they could be located as individuals, but they were not utilizing their foreign training. A study of the readjustment problems of returning students had to be made. They were 'men of two worlds', who in a sense had been made unfit for return to their own culture by their educational experiences in another. The problem of government subsidy, and the retention of official bursary students in government employ in the face of intense occupational competition from private firms, had to be studied. Thus, a foreign-trained forester, agronomist, veterinary, or engineer could frequently receive greater salary and achieve greater social status by utilizing his bilingual skills than by practising the profession he had acquired.

The project on the decentralization of educational administration and control need hardly be mentioned. It was technical reform in the Ministry and *Ostan* offices of education, designed to achieve the philosophical objective of increased local participation and the salvage of manpower.

The projects of agricultural and technical training, also, need little comment—although they represented more than two-thirds of the total effort. They were based on well-known educational techniques, some of which are described in the present volume. Thus, the educational project envisaged an organization of the Iranian villages in a four-point programme (health, literacy, handicrafts, and agriculture) which was largely an adaptation of the James Yen's Mass-Education Movement of pre-war China. To supply the teachers for

these village schools a secondary-level rural teachers' training school, predominantly agricultural in nature, was to be established in each *Ostan*. To supply the agricultural teachers for rural normal schools, a scholarship programme was established in the Faculty of Agriculture in the Teheran University. To maintain constant contact with, and supervision over, the efforts of the local village school, a system of travelling educational missions was planned, directly based on Mexico's famed Educational Missions and Chile's *Instituto Información Campesina*. Similarly, in the area of technical education, major emphasis was placed on the establishment of a co-operative industry-directed apprenticeship system, similar to that of Brazil's *Serviço Nacional de Aprendizagem Industrial* (SENAI), and technical schools consisting of the existent but utterly ineffective *Honoristans* transferred to the administration of the co-operative and directly linked to industry. Again, a system of scholarships to the Faculties of Technology and Engineering, in the Teheran University, was to supply the improved staffs for these technical schools. A stop-gap programme of local trade courses was planned as a concession to the immediate demands of other sections of the Plan.

Two projects, however, represent educational efforts to solve indigenous social problems in Iran. The first is women's education in a Shi-ite Moslem society. The second is tribal education in a country attempting to shift from a nomadic to a fixed agricultural economy, and in places from an agrarian to an industrial.

The mores of the Iranian urban community severely restrict the employment opportunities of women. In tribes and in the peasant villages, women work alongside their husbands or produce marketable commodities in the home, usually in the form of carpets and rugs. But in the towns and cities marriage is the only wholly acceptable vocation for a woman, and teaching is a very bad second. The career of nursing has until recently been considered almost as bad as prostitution, and even to-day few respectable Iranian families would be willing for their daughters to become nurses. The whole area of office work is so unacceptable that most companies find difficulty in employing a clerk or secretary unless she is Armenian Christian, Zoroastrian, or Jewish. Employment in commerce and industry, especially manufacturing, invokes a major loss in social status, and occurs only in the most humble families. Yet Iran, if it is to compete on anything like a par with other modern technological nations, if it is to achieve the increased productivity and the raised material standard of living it desires, simply has to bring into productive employment the huge mass of its currently unemployable woman-power. In any Western nation something in the order of 40 per cent. of those gainfully employed are women. Can Iran afford the luxury of carrying this huge proportion of its population in non-productive 'idleness'? Obviously it cannot. And obviously the changing of public opinion to permit their employment will be

primarily a matter of education. But the type of education will have to be rather different from that traditionally given girls in Western countries. Merely to establish classical girls' schools on a Western model would do no more than to produce a generation of young women who would be utterly unfit for life in their own culture, demanding Western freedoms and being denied, frustrated, sullen, hurt. The point of application of this educational process had to be that of altering the mores of the community, as well as preparing girls for satisfactory adjustment to the changed society. This was a far more difficult problem. It would strike at deeply rooted religious and social traditions. Iran was unwilling to face it. Iran wanted the *material* advances of Western technology—but when it came to the test, was unwilling to pay this, high, but essential, *social* cost of that changed standard of living. Lip-service was paid to 'girls' schools', but the central problem was never faced.

Iran has over eighteen hundred tribes, many having different ethnic origins, speaking different languages, owing 'allegiance' to different chiefs. The Turkoman, Ghasghai, Bakhtiari, Arabe, Khurd, Lurs, and Baluchi are the main nations of tribes, but there are dozens of smaller ones. A few have been satisfactorily settled on the land, and live by fixed agriculture, or have been absorbed into industrial enterprises, notably the oil industry. But the majority still practise some form of nomadism—some of it vertical nomadism between winter and summer pastures in the mountains—with periods of movement varying from a few days to as much as eight months per year. Reza Shah, between the two world wars, tried to settle these tribes on the land, and to win their allegiance to the National Government by force. His policy largely failed, in spite of the imprisonment of many of their leaders for years: and the tribesmen of Iran to-day continue their ancient patterns of migration, owe direct allegiance to their chiefs, and have at times defied and revolted against the official government. These tribes represent about 22 per cent. of the total population of the country. They raise sheep and goats, weave carpets and rugs, and directly or indirectly are essential to the largest single source of foreign revenue after oil. Yet to date no method of *formal* education has been devised which is effective. Many solutions have been tried: travelling teachers; dual schools in winter and summer pastures; boarding schools; split tribes with the women and children remaining behind on migrations. All have failed. But the essential factor in this troublesome problem has not been squarely faced by official Iran. The average production of real wealth *per capita*, among the nomadic tribes, is simply inadequate to pay for even the most modest system of social services considered essential to a modern country. The total wealth produced by one tribe studied was less than that required to supply their own children with even minimum fundamental education for four years at the very lowest costs then current in Iran. Here again the 'educational'

problem is in reality a social and moral one. If Iran wants those tribespeople to be incorporated into the general society, if it wants to increase their standard of material living, then it simply must pay the price of a social readjustment which settles them on the land, changes their economy from pastoral to intensive agricultural or industrial. This is a process that can successfully be applied—as the experience of the oil industry and agriculture in the Turkoman *Dhast* has proven. But it is a solution which has a high social cost—and to date Iran has been unwilling to pay it.

Achievement

The Overseas Consultants Inc., on the basis of a subsequent contract, agreed to supply a limited number of technical advisers for Phase III, or the Implementation of the Plan. It soon became apparent, however, that the conditions under which these very few consultants were to work precluded any successful outcome. The OCI repeatedly advised the Iranian Government to terminate the agreement, and early in 1951 this was done, and the last of the OCI personnel was withdrawn. On March 7th, 1951, Marshal Razmara, the Prime Minister, was assassinated by Abdulla Rastegar, a member of the *Fadayam Islam,* and Iran embarked upon a troubled period of political strife that virtually ended all work on the Seven-Year Plan.

What was actually accomplished, in Phase II, in the educational part of the Plan? About thirty rural schools were founded; six secondary-level agricultural teacher training schools were established; five existing *Honorestans,* or secondary-level technical schools, were transferred to the Ministry of Education and equipped and financially subsidized; the pertinent Faculties of Teheran University received subsidies to enable them to assist in preparation of materials and personnel for the Plan; in-service training courses were established at two army factories; summer classes at the Faculty of Agriculture were established for teachers from the agricultural teacher training schools; certain premiums and incentives were fixed to reward teachers who voluntarily attended summer classes; a training programme for typists, stenographers, file-clerks, secretaries, and accountants was established for employees of the Plan and companies engaged in projects under the Plan; a programme for teaching simple agricultural methods and machinery repair was organized for army conscripts so that they might return to their villages as more effective farmers after military service; certain financial subsidies were made to various ministries to encourage their organizing classes in their respective areas of work, especially in public health and agriculture; and a programme of overseas training was established with the co-operation of Point Four and United Nations Technical Assistance, for the preparation of technicians in various fields. Since 1951 the Educational Division of the Plan Commission has co-operated with TCI (Technical Co-operation for

Iran) on a number of educational projects, most of which were initiated by TCI and had no direct relationship to the original Plan.

Why did the Seven-Year Plan fail to attain its stated goals? There are, perhaps, hundreds of contributory reasons. One reason, frequently advanced, that will not stand critical scrutiny is that the Plan lacked adequate financial backing. Iran is a country of remarkable potential riches. Its available funds in the early years of the Plan were enough, with moderately skilful handling, to have achieved major advances. But three fundamental reasons for failure may well serve as lessons for future endeavours: the Plan was never permitted a dynamic political leadership sincerely and enthusiastically committed to the programme; the Plan was attempted in a political and social climate that at times verged on a state of chaos, and never was truly conducive to major social reforms; the Plan was superimposed on a population which was never prepared for the hard decisions it would have to make, and which in fact was unwilling to pay the social cost of material advancement.

ROBERT KING HALL.

[Dr. Robert King Hall, American Joint-Editor of the YEAR BOOK OF EDUCATION, and Professor of Education at Teachers College, Columbia University, headed the Educational Division of the Overseas Consultants, Inc. Mr. Hossein Movahed was originally the assistant to Dr. Djasaeri, Iranian Head of the Educational Division, and later his successor as Head of that Division when Dr. Djasaeri became Minister of Education. It was at the suggestion of the Seven-Year Plan Commission that they were asked to prepare this brief account. It remains, however, entirely a personal and in no way an official appraisal of the Plan. Dr. King Hall prepared the article, and is responsible for the views stated in it. Mr. Movahed supplied certain of the data on the recent years of the Plan.—THE EDITORS.]

CHAPTER SEVEN

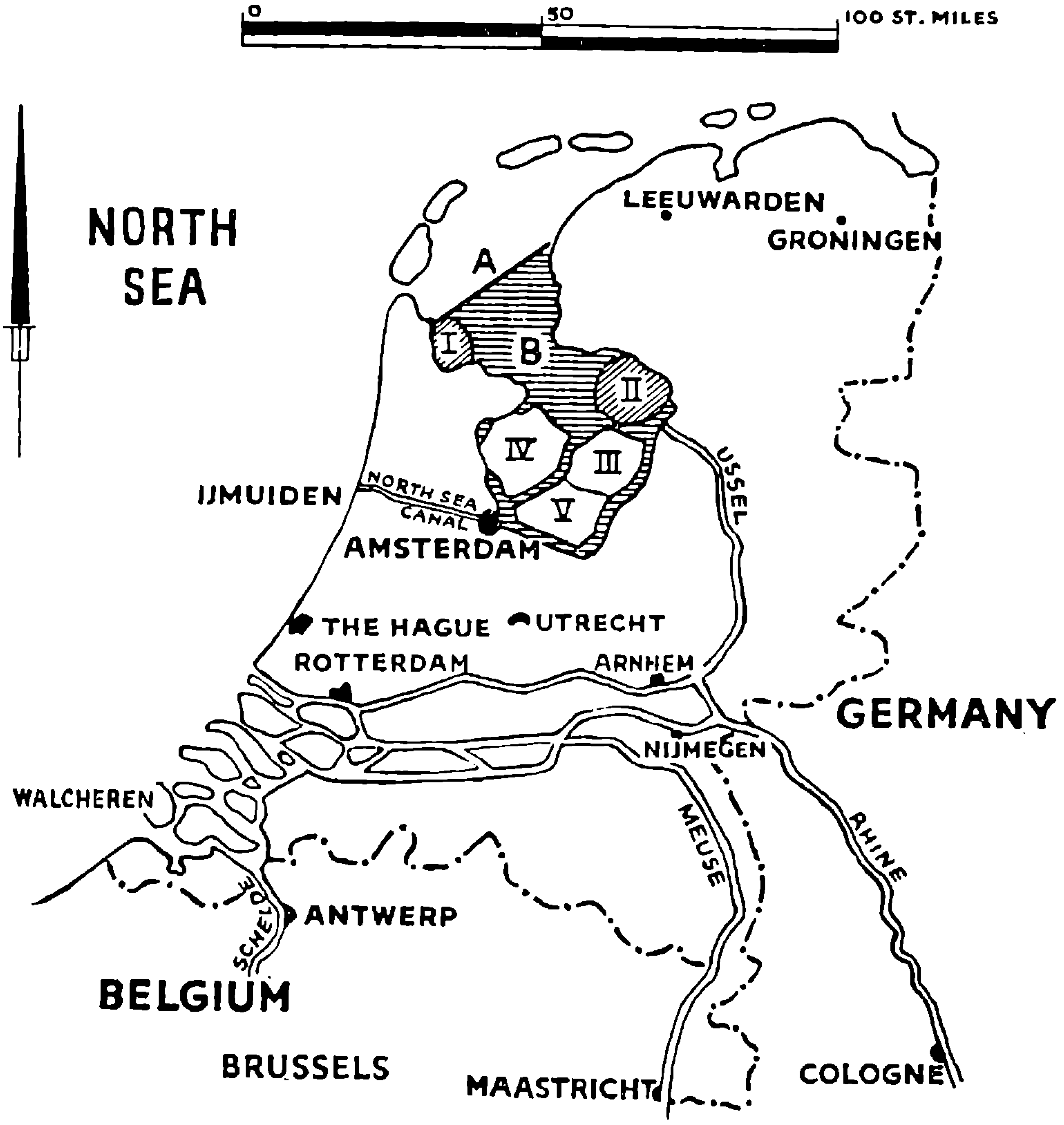
THE NETHERLANDS' ZUIDERZEE-PROJECT

THE Zuiderzee-Project aims at the reclamation and colonization of about 550,000 acres of land from a shallow sea—the parts to be reclaimed are not deeper than 15 feet below sea-level—in the centre of the country (see map). When the project is finished, it will mean an increase in the surface of cultivated land of about 10 per cent. The soil of the new area can be classified for the greater part as very fertile. The reclamation is being carried out by the Dutch Government, according to a law introduced to the parliament by Lely, the Minister of *Waterstaat* (department for the maintenance of dikes, roads, bridges, canals, etc.) and passed in 1918. Lely, as a former employee of the *Zuiderzeevereniging* (a private association for the study and the promotion of the reclamation of the Zuiderzee) made the first plan soundly scientific.

The first phase of the work was the construction of a huge enclosing dam 20 miles in length, from the province of North Holland to the province of Friesland, which separated the Zuiderzee from the North Sea. On the dam a broad highway was built which facilitated communication between the western and the northern part of the country and still left space for a double-track railway. The dam was finished in 1932. The construction of the enclosing dam made the Zuiderzee a lake (it is now called IJsselmeer). This IJsselmeer as a whole will not be reclaimed, but in the lake five polders will be made and a large surface of open water will remain (B on the map). This lake is necessary because: (1) there must be a reservoir for the water coming from the river IJssel; (2) the greater part of this remaining lake is too deep to be reclaimed; (3) the bottom of the lake partly consists of poor soils; (4) this lake gives an enormous reservoir of fresh water for irrigation, drinking water, and several other very important purposes. The polders are made by building a dike round the area to be reclaimed. When the dike is complete, the water is pumped out by pumping stations.

During the construction of the enclosing dam, the dike surrounding the first polder (the Wieringermeer, I on the map) was built, and in 1930 this polder of 50,000 acres became dry. At the very end of the war in 1945 the Germans blew a gap in the dike and the Wieringermeer was again flooded, but at the end of 1945 it was reclaimed for the second time. In 1937 the construction of the dike

GENERAL MAP OF THE NETHERLANDS



A	Enclosing Dam	20 miles
B	Yssel Lake	
I	Wieringermeer Polder	49,000 acres
II	North-east Polder	117,000 acres
III	East Polder	128,000 acres
IV	West Polder	134,000 acres
V	South Polder	110,000 acres

of the second polder (II on the map) began, and in 1942 this polder, of 120,000 acres, was also dry. Some years ago the construction of the dike, sluices, and pumping stations of the third polder (III on the map) started. The completion of this polder will be delayed for a year, because of the disastrous flood in the province of Zeeland at the beginning of 1953. All the machinery, ships, technicians, and labourers available in the dike-building trade were needed for the reconstruction of the dikes in the flood-area. Nevertheless, we hope

that in 1957 the third polder will be pumped dry. At the moment it is thought that it will take about twenty years to finish the whole project.

The members of parliament who voted in favour of the law of 1918, mentioned above, were certainly conscious of the fact that they inaugurated an immense project, but probably they did not understand then how great was the challenge they gave to the Dutch people. Certainly, although Lely's plan was well prepared he did not foresee all the problems. At times they demanded the utmost of the technical, scientific, and organizing capacities, and sometimes, too, of the material resources, of the Dutch people.

Engineering and Agriculture

The first important problem was the construction of the enclosing dam. Notwithstanding the long experience of the Dutch in this field, the construction of this enormous dam, which had to cross deep channels carrying millions of cubic feet of water at every change of the tide, was in certain respects something quite new. Only with the help of the Nobel prize-winner Lorentz, the most famous Dutch scientist of that time, was the course of the dam definitely established. A number of other technical problems cropped up, for which no ready-made solutions were at hand. To cut a long history short, the reclamation of the Zuiderzee gave a very strong stimulus to scientific research in the field of hydraulics and related sciences. Water engineering in the Netherlands would be on a much lower level now if this reclamation had not taken place. Former employees of the government agency for the reclamation of the Zuiderzee are now teaching as professors at the technical university at Delft, and disseminate in this way the knowledge they gathered in studying the problems of the reclamation.

Quite new, too, were the problems to be solved in the field of agriculture. Lely still thought that the land could be transferred to private farmers almost immediately it became dry. Closer study showed that it would be unwise to do so, for in some smaller polders, which were made in the nineteenth century by reclaiming parts of the bottom of the sea, the condition of the soil had given endless trouble and had caused heavy financial losses to the farmers. Normally polders at the seaside were reclaimed only when the land was silted up to such a level that it remained dry at normal high tide. The government came to the conclusion that the land should be used by a government agency till it was in normal farming condition and could be transferred to farmers without abnormal risk. So the problem of handling this soil so that it would become good farming land in the shortest time and against the lowest costs arose. The question agricultural science had to answer here was a very difficult one. There was practically no experience in this field, and extensive laboratory and field research began. A very small polder, for ex-

perimental purposes only, was made before the Wieringermeer became dry. It can now be said that the problem was solved in the right way. The soils in the new polders are now in better condition than those anywhere in the Netherlands. As well as this, agricultural science had to solve a lot of other problems, and a wealth of knowledge which is disseminated now by publications, by teaching of experts at the agricultural university of Wageningen, and on a lower level by all other means of education and communication, was the result.

Sociology

Some years before the Wieringermeer became dry a sociological study of the colonization of the Haarlemmermeer—45,000 acres, reclaimed in 1852—was published. It showed that a free and unplanned colonization of a large surface of new land can easily lead to very bad social conditions in the beginning of the development of the new area. This was one of the reasons for the government resolving to take a further and unforeseen step in the direction of government interference in the development of the new polders. It came to the conclusion that farms, houses for farmhands outside the villages, and the greater part of the houses in the villages should be built by the government; colonists should be selected by a government agency; special powers of local government should be given to a governing body closely related to the government agency charged with agricultural affairs and the colonization, so that all activities in relation to the colonization and the first development of the new society could be well co-ordinated. These new tasks of creating the basic equipment and guiding this society in the first years of its development should also have been for the polder's future society based on scientific research, on sociological knowledge, and special social research. It was a pity that in 1930 social science in the Netherlands was not yet able to give real help. It was still in its first stage of development and not ready to apply its findings to the social planning of the new polder. So the government officials who were in charge of the project had to find their way, guided by common sense and by trial and error. Common sense did not fail and the men who planned the settlement of the Wieringermeer and carried it out, can be proud of their work. But on the other hand important errors were made, e.g. in the physical planning of the villages. Through lack of knowledge of the social and economic functions of a village as a centre, a wrong estimate of the number of villages required for the polder was made. As a result, the three villages which were built were located in the wrong places. This and other mistakes could have been prevented if social science had been able to do then what it could do ten years later. In 1943, after the second polder became dry, social science—which had advanced in the meantime, especially in the practical applications of

its results—was formally called in by the government agencies to give its help to the social planning in the new area. After that, the history of the relation of social science to the Zuiderzee-Project is essentially the same as that of hydraulics and agricultural sciences. The "Zuiderzee" not only called on social science but contributed to science and education; and it gave much. In a certain sense social research for the social planning of the polders is still in its infancy and the third one will show the influence of social science to a far greater degree than the second. But it can already be said that social science has been shown to be indispensable.

Influence

The Wieringermeer polder has now been in existence for twenty years, though its development was interrupted by the inundation in 1945, and an important part of the second polder is already settled; we are now able to get some impression of the influence of this project on the national life of the Dutch people. The influence in the field of agriculture, in the widest sense, is already unmistakable. The two polders have become an example and a yardstick for the rest of the country. Every year thousands of farmers visit the new area, where soil conditions, land division, farmhouses, and drainage systems are better and more up to date than anywhere in the country, and where the soil yields top outputs. In this way the new polder is a stimulus for the improvement of agriculture in the country as a whole; for private activity in this field as well as for the activity of government agencies.

It cannot yet be said what the influence of the new polders will be on social life in the broader sense, especially in the rural parts of the Netherlands. The Wieringermeer polder is too small, and the North-East polder still too young, to get a clear picture of the typical features of social life which will be characteristic of the Zuiderzee area in the future. Less certain still is the degree to which those features will be a result of the careful selection of the colonists and to what degree dependent on social planning and other factors. So it is not yet clear how social life in the polder will act as a force, stimulating change in the rest of the country. But it seems almost unquestionable that social life in the polder will differ in many ways from that in the older parts of the country and that in this respect too, the Zuiderzee-Project will act as an accelerator to development in 'the old country'.

An interesting aspect of the colonization of the new polders is the great mixture of people of different religious denominations, which will be the result. Roughly, the Dutch people consist of one-third strict Calvinists, one-third liberal Protestants and non-church members, and one-third Roman Catholics. Religion has an enormous influence on social life and social organization in the Netherlands. The three groups mentioned have, for example, their own farmers'

organizations, their own associations of employers, their own trade unions, and their own youth associations. They have, too, their own schools; the children of liberal Protestants and the non-church members attend for the greater part the so-called *openbare* (public) government schools, the Calvinists and Roman Catholics so-called *bijzondere* (special) schools, private schools run by a ' school association ' and mostly of a denominational character, but subsidized by the government. In the ' old country ', especially the countryside, Roman Catholics and Protestants live for the greater part in separate areas. The provinces of Noord-Brabant and Limburg are almost totally Roman Catholic, and in the northern part of the country the majority of the rural Roman Catholics are concentrated in a limited number of regions. The different groups of Protestants are more mixed, but in the countryside an important part of the strict Calvinists, too, are concentrated in certain rural districts.

Now it is accepted as an unwritten rule, that from those who apply for a farm in the polders and in other respects meet the requirements, the colonists are so chosen that about one-third are Roman Catholic, one-third strict Calvinist, and one-third liberal Protestant and non-church members. For technical reasons it is not possible to make villages which are pure Roman Catholic or pure Calvinistic, etc., and if it were possible to do so, it is probable that such a policy would not be accepted. So every village in the polder shows a population composed of the three different groups. This means that every inhabitant has to live face to face with people of a denomination quite different from his own, often for the first time in his life. When the project is finished a whole new province will show this strong mixture of denominations. From the educational and general social points of view it is very important to see how the colonists will react to this situation. It was interesting that in the early development of the Wieringermeer polder, denominational differences played little part in social life. Instead, facing the problems of pioneering gave a sense of unity. All the children attended one school, a ' unity '-school, and social organization was far less influenced by religious denominations than elsewhere in the country. But after some time, when the conditions became more stabilized, the usual pattern gradually established itself here, too. Now every village has its denominational schools, and social life in general is organized along denominational lines. Nevertheless, it is not improbable that the relations between people of different denomination in the new polders will, in the long run, be different from those in the ' old country '. The colonists face a new situation. They are not burdened with all the traditions and reminiscences which are important in determining the attitudes of the denominational groups towards each other in the other parts of the country. Perhaps the polders will in this way become an ' experimental station ' and an

example for the 'old country', and influence the situation in the Netherlands as a whole.

But perhaps one of the most important educational effects of the reclamation of the Zuiderzee is the influence it has on the spirit of the Dutch people as a whole. The Dutch people have become more and more proud of this work. They see it as one of their major achievements and it gives them confidence in their own strength as a nation and stimulates the energy necessary to tackle other heavy tasks. The grim will with which the reclamation of the area flooded at the beginning of 1953 was organized and carried out would have been almost unthinkable without the peaceful fighting spirit which arose from this really national battle of the Zuiderzee.

Summarizing the educational aspects of the reclamation of the Zuiderzee at the end of this brief survey, we can draw the following conclusions. (1) Projects of nation-wide importance make heavy demands on science and higher education in the country in question. It is not sufficient to have a good master plan prepared. It shows that, during the realization of the plan, scientific research is continuously needed. Most of the research has to be done after the work has been started, and not before. If, for example, in a so-called underdeveloped country such a plan is to be carried out, having a good plan made by a group of foreign experts is only a first step. For the plan to be realized it is necessary to have permanently well-trained scientists, equipped with laboratories, research institutes, etc., close at hand to solve the problems which will continuously crop up. In fact, it demands that higher education and science be well developed in the country itself. As well as the technical sciences and agricultural science, social science is highly important. (2) Projects like this, if carried out scientifically, will have a very favourable influence on the development of science and higher education. (3) Large projects like this can have a very important influence as a stimulus for the social and economic development of the country as a whole. (4) Successful realization of projects of importance elevates the energy and the spirit of a nation.

E. W. Hofstee.

CHAPTER EIGHT

THE TENNESSEE VALLEY AUTHORITY—TVA

THE Tennessee Valley Authority is an agency of the United States Government established primarily for the development and wise use of natural resources. The principal resources of the Tennessee Valley are the Tennessee river system, the soils of the region, and an abundant rainfall. By conserving and regulating the waters of the river, another resource was made available: electric power.

The *development* of the river required the construction of a system of multiple-purpose dams for flood control, navigation, and water power. This task has been accomplished by TVA's using its own engineers, builders, and operators. The *use* of the resource, once developed—the employment of the stream for navigation and recreation, the use of electricity for industry and agriculture—is growing rapidly through the efforts of many people and the agencies of state and local governments. The American system of economic organization relies upon the private businessman to establish the factories which use the power and which, in turn, provide the jobs and the income for workers. It relies on the individual farmer so to manage his land that the soil resource is conserved and put to the most fruitful use. The full development and employment of the resources of the Valley depend upon communicating to the people, to the men of industry, commerce, and agriculture, a knowledge of the tools available to them, and the best methods of using those tools. This is essentially a task of education in its broadest sense.

The Geographical Setting of the TVA

The TVA operates primarily in the geographical area broadly described as the Tennessee Valley region, centred on the forty thousand-square-mile drainage area of the Tennessee River. A large part of the State of Tennessee and parts of the States of Virginia, North Carolina, Georgia, Alabama, Mississippi, and Kentucky are included in this watershed area. Other activities, for example those designed to encourage these states to develop more adequate planning and recreation services, have been conducted on a statewide basis without restricting the effort to the watershed area.

The power service area, within which TVA is the sole source of power supply, is an area of eighty thousand square miles with a population of more than five million persons. TVA also supplies

electric power to atomic-energy plants of the United States Government located within the region, and by 1956 these plants will take one-half of all energy TVA will generate.

Certain other programmes, such as the testing and use of experimental fertilizers, and TVA's contributions to national defence, are national in scope.

The Problems and Potentials of the Region

In 1933, when TVA began its operations, the latent resources of the Tennessee River were largely undeveloped. It was subject to raging torrents and destructive floods in the winter and low flows in the dry periods. It was unsuitable for large-scale modern freight navigation, and little hydro-electric energy was produced from its flow. Only two large dams, one private power dam and the Wilson Dam started by the Federal Government during World War I, had been built on the main stream. The river was thus ' unspoiled ' by unco-ordinated single projects which might otherwise have hampered the creation of a modern multiple-purpose engineering plan designed to achieve the maximum possible benefits.

In 1933 the land areas of the region were in conspicuously poor condition. The 150,000,000,000 tons of rainfall which annually pounded the land—laid bare by excessive reliance on row crops and by destruction of much forest cover—carried thousands of tons of topsoil down the streams into the Tennessee River and its tributaries. Areas suitable for forest cover were undeveloped and unprotected from the ravages of fire. Ideas of sustained-yield forestry had almost no advocates and fewer practitioners. Agricultural yields were low over most of the Valley area, with little prospect of changes which would reverse decades of ruinous practices. As the lands were impoverished, so were the people. The *per capita* income even in the prosperity year of 1929, before the national depression, was only 44 per cent. of the national average. The region was not as productive as its resources permitted, and it depended too much upon income from agricultural and other raw materials. Manufacturing was developing but very slowly.

Most of the ingredients for better agricultural and forestry development and more industry were present. The river had great potentialities; the use of farm and forest lands could be improved; and electric power could help on farms, in homes, and in factories to make living and livelihood more productive.

Scope of the TVA Programme: the Role of Education

The TVA is charged with responsibility for developing the Tennessee River for flood control, navigation, production of power, and other purposes; chemical research and production of experimental fertilizers and munitions useful in agriculture and national

defence; promoting, in the national interest, the agricultural and industrial development of the Tennessee Valley region. Since 1933, Congress has appropriated some $1,700,000,000 for the activities directed by the TVA.[1]

The construction and operation of dams, steam plants, transmission lines, and other engineering works and the operation of the chemical plants are done by TVA's own employees. All other activities related to the broad mandate of regional development are administered largely through contracts and other co-operative arrangements with state and local governments, educational organizations and agencies, and other bodies.

Thus the achievement of these purposes is dependent upon co-operation and voluntary action by other people and other public and private agencies working in the region. This involves more than acquiescence by the people; success depends upon the *active participation* of the people and of their organizations and institutions in programmes which help to develop the region's resources. This process involves farmers, businessmen, teachers, professors, technical experts, political leaders, and other citizens of the Valley.

It is reasonable to assume that behind the Tennessee Valley programme, education serves as the catalytic agent in the whole process of change. Education, broadly defined as the acquisition of new skills and attitudes, the achievement of new understandings, the changed patterns of behaviour, and the assumption of new capacities for self-direction, responsibility, and leadership, *is in fact* the key to the dramatic changes which have occurred in the Tennessee Valley.

But education as defined here does not stand alone as a technique, an institution, or a process. It is related to a complex admixture of sound policy, clear objectives, effective organization, competent professional and technical personnel, and adequate financial support. Sound educational policies and practices which instruct and motivate people to a change of attitude and behaviour are basic, but they can be realized only when the other important factors are also present. More specifically in the TVA, the following interrelated and mutually supporting factors were all necessary to carry out its responsibilities.

(1) Clear legal authority. The TVA Act directs that objectives be sought in co-operation with state and local governments, with other agencies of the Federal Government, and with organizations of citizens.

(2) Clear policies for carrying out the purposes of the law. Many

[1] Some of the principal parts of the programme and the accomplishments are summarized in the table which appears at the end of the article. Readers who are interested in a more complete account of the work of the TVA are invited to request further information from the Director of Information, TVA, Knoxville, Tennessee.

policies can be crystallized in detail, however, only in the light of experience in solving concrete problems.

(3) A highly trained, competent, and imaginative staff, chosen without reference to politics, race, or creed. The staff must also train competent persons to carry on functions which may be taken over gradually by state and local governments or by organized groups.

(4) Assignment of responsibility to specialized units of the organization, with co-ordination achieved through general management. This type of organization makes possible a division of labour based on special competence, yet provides a balance of advice and judgement in approaching general problems.

(5) Citizen participation in the programme through the 'test-demonstration' approach. Professional and technical personnel are thus enabled to test their hypotheses on a practical proving-ground. Citizens thus acquire new knowledge by observing the results of their own work. Thus self-taught, they become teachers among their neighbours.

Utilization of Power

A few basic facts on the dimensions of power utilization in the Tennessee Valley provide the framework for a case description of the role of education in the TVA programme.

(1) In 1933, before the TVA was established, the privately owned power companies served fewer than three hundred thousand customers; in 1953 over four times as many, or one million three hundred thousand, were served by the municipally owned and rural electric co-operative systems which distribute TVA power in the same area. Part of this increase may be explained by a 19 per cent. increase in population between 1930 and 1950 and the growth of cities, but most of the increase occurred as a result of the extension of service to rural areas.

(2) In 1933 only 3 per cent. of the farms in the area (about fifteen thousand) had electric service, compared with 11 per cent. in the nation. In 1953 about 90 per cent. of the farms had service, which is approximately the national average. More than a tenfold increase in miles of rural lines has taken place in the twenty-year period.

(3) In 1933 the average residential consumer, both in and out of the TVA region, used about 600 kilowatt-hours per annum; in 1953 the average residential consumer of TVA power used 4,314 kilowatt-hours, while the average for the nation was 2,257. In 1953 all residential consumers in the TVA area used nearly 5,000,000,000 kilowatt-hours; this was thirty-seven times as much electricity as residential consumers used in the region in 1933. These increases in the use of electricity were fostered by a policy of low rates, and introduction of new uses of electricity in homes and on farms as well as in industrial development.

Responsibility for distribution of these vast amounts of power falls upon the 148 municipal and co-operative distributors which deliver the power to the homes, farms, business establishments, schools, churches, and other institutions of the Valley. This method of operation is consistent with TVA policies to get local organizations to administer programmes of regional development.

TVA contributes leadership in a programme to expand the effective economic use of the Valley's power resource. Some fifty full-time engineers, home economists, rural-electrification experts, and others work with distributors of TVA power and with educational institutions and farm groups to find new and more efficient uses for electricity. These experts work under the administrative direction of the TVA Manager of Power. Experts from other organizations in the TVA also co-operate in this work.

A special study of the educational phases of this work revealed that during a two-year period between 1947 and 1949 there were more than a thousand rural meetings and demonstrations related to electricity use, attended by more than fifty thousand persons. During these meetings farmers, housewives, and others were taught with films, slides, lectures, demonstrations, and other educational devices ways in which they could use electricity to reduce labour, increase comforts, produce more and better products, and improve their standards of living. Demonstrations and instruction in proper wiring, house heating, use and care of appliances, installation of water and sanitary systems, use of motors and lighting to grind feed, milk cows, produce more eggs, grow plants, store vegetables, hatch chicks, dry hay, and a host of other beneficial and useful ideas were the subjects of these programmes. Special schools and institutes were conducted for homemakers, home economists, farm agents, teachers, businessmen, and others seeking knowledge about domestic, institutional, and commercial applications of electricity. The widespread use of electricity on farms is related to needed changes in agriculture, which require that more land be used for cover crops and less for row crops in order to conserve soil and water and diversify the risk of farming. The use of electricity for hay driers, milkers, water warmers, food lockers, etc., is directly related to this objective. The application of electricity to feed-grinding, poultry production, freezing of strawberries and other crops which are soil-supporting and income-producing is also related to the agricultural land-use changes which are designed to improve the land and increase the income of rural peoples.

These many changes in the habits of people could not be accomplished without competent professional and technical personnel to engage in research, give guidance, and provide instruction leading to the integration of electric energy into the life and living of the people. This requires more trained people; students of home economics and agricultural engineering who work part of the time

and go to school part of the time find opportunity for employment in these programmes. Manuals and other books of instruction have to be written and published. Personnel of the 148 distributors gain new training through institutes and other training devices. Home-economics laboratories are used for training classes for teachers, extension workers, community leaders, and others. Research adds new knowledge about the almost limitless versatility of electricity.

New fields of application are emerging, such as radio and television. Educational leadership is needed to help people use these resources wisely and well.

Land-use Changes

The task of getting people to improve farming and the use of their soil called for the help of chemical engineers, agriculturists, and foresters working as a professional staff advisory to practical farmers. For example:

(*a*) The chemical engineering plants at Muscle Shoals have produced about three and a half million tons of experimental fertilizers containing phosphates, nitrates, and combinations of these and other fertilizer ingredients. These products have been used by the Valley farmers in rebuilding the soils and increasing their income-producing capacities.

(*b*) Between 1934 and 1949, Valley farmers planted almost a million fewer acres to row crops, substituting open pasture and hay production of improved quality. They correspondingly increased the number of cows, calves, and hogs; purchased greater amounts of commercial fertilizers; doubled the physical volume of dairy products and trebled the value of all farm products per farm (adjusted to changes in price index). They owned over five times as many tractors and decreased farm tenancy by almost 50 per cent.

(*c*) Concurrently, agricultural engineers working with farmers developed new methods of drying hay and new machinery for threshing grains, curing sweet potatoes, freezing foods, and many other devices to make economically feasible the great changes in land use which temporarily caused hardships on farmers who were accustomed to depend upon income from row crops.

(*d*) On the Valley lands planted to trees or suitable for forests (almost half of the land area), similar changes occurred between 1933 and 1952. Reforestation is now going forward at the rate of fifteen thousand acres per year, with approximately two hundred thousand acres having been reforested. Forest-fire protection has moved from an almost negligible precentage to some protection for 89 per cent. of the land. The annual burn index has correspondingly decreased. Before 1941 there was no example of sustained forest yield. Now there are over three hundred demonstrations of sustained yield on a half-million acres: private timber lands.

How has education been related to these changes? The same principles and practices described in connection with power utilization apply to the efforts in land use—co-operation with private landowners, co-operative relationships embodied in contracts with private and public agencies and organizations—and the basic technique of *test-demonstration* to guide the efforts of all concerned. The chemical-engineering efforts were guided by close and active participation of agricultural experiment stations: intensively in the Valley areas and less intensively with the experiment stations of most of the forty-eight states and with private distributors of fertilizer. Practical tests and demonstrations were made by an aggregate of 68,862 farmers selected by their own neighbours organized into community and county soil conservation organizations. Most of these were in the Valley. Professional leadership is provided by agricultural-extension county agents operating under contractual relationships with university extension services and the United States Department of Agriculture, with funds provided by the TVA in decreasing amounts as the states put more of their funds into the programme. Leadership in forestry is similarly arranged through a series of contracts and relationships with the agricultural-extension services and state and national forestry organizations.

In these ways thousands of ' laboratories ' have been set up in the Valley where farmers try out on their own farms new methods of land use recommended by experts; keep records of results; show and tell their neighbours what has happened; identify needed adaptations of recommended practices to different soil, topographical, and moisture conditions; inform the experts of errors or limitations in the application of theoretically sound possibilities; and otherwise participate in the admixture of science, common sense, and hard work which are the keys to significant practical results. There is little or no exhortation here: only thoughtful consideration of needed and feasible changes in land use; the making of substantial investments of money and labour in effecting the changes; attendance at thousands of meetings and conferences (often across the fence with neighbours or in the schoolhouse) to share experiences and to redirect their efforts and the efforts of experts; and finally, the reaping of rewards in the form of improved lands, greater control and use of water on the land, and increased income.

Other Examples of Education in Regional Development

Similar case illustrations could be described in the areas of recreation, fish and wild life, malaria control, planning, government research, and to a lesser degree in formal education itself.

In the latter category contractual and other co-operative arrangements have been developed with state departments of education, colleges, and universities for the production of instructional materials

and for the conduct of teacher-training workshops in resource-use education, school forestry, school camping, and related projects. One of the most dramatic developments, directly related to educational services, has occurred in the creation of regional libraries. The regional-library idea had its origin in the provision of library service to TVA construction workers and their families at each of the construction camps built at the dam site to house the workers who built the large, multiple-purpose dams. Most of these projects are located in areas remote from cities and towns. TVA entered into contracts and paid local library organizations to establish book service to TVA workers for approximately three years at each major dam built by TVA. As the dams were finished, TVA withdrew its financial support for book service. The states and counties with their own funds have continued the service to their own people through twenty-six regional library organizations, which now deliver books, in especially designed bookmobiles, to the remotest rural areas of the Valley.

Within the TVA organization itself, in-service training and educational processes have been consistently used in apprenticeship, journeyman, and special craft and operator-training programmes which have been developed and administered in the closest co-operation with the unions of skilled labour. All categories of employees—engineers, accountants, social scientists, *et al.*—have experienced the need for and have participated in in-service training activities designed to improve their understanding and performance.

Conclusion

It is perhaps a fair conclusion to state that a major portion of the population of the Tennessee Valley has had some direct experience in the educational process related broadly to the development of the region. To most of the citizens, to be sure, the educational experience has been limited to some small portion of the whole programme, but many have influenced and have been influenced by educational processes in several programmes. A limited few have developed understanding of the factors and interrelationships involved in an integrated approach to resource development as very briefly described in this paper. Not the least of those who have vicariously experienced some of the educational values of the Valley development have been almost ten thousand foreign visitors and trainees from nearly every country of the free world who have come since 1946 to examine the project and carry back borrowings from the TVA idea to their native lands.

GORDON R. CLAPP.

SUMMARY OF SELECTED KEY ITEMS OF PROGRESS IN THE DEVELOPMENT OF THE TENNESSEE VALLEY

Measure of Progress	*1933*	*1953*
Development and Use of River		
1. Construction of dams	Tennessee River uncontrolled.	A system of 30 major dams control the river system. Twenty were built by TVA.
Creation of flood storage	Almost negligible.	12,000,000 acre-feet of storage for control of floods on the Tennessee and lower Mississippi Rivers.
3. Benefits of flood storage	Negligible.	Annual savings of $11,000,000 are now estimated, more than half of which accrues to the Mississippi Valley.
4. Creation of navigation channel	Limiting low-water depth of 1–4 feet.	630 miles of navigation channel of minimum 11-foot depth which connects with inland waterway system of 9,000 miles.
5. Shipping on waterway	33,000,000 ton-miles transported; mostly sand and gravel.	Over 1,000,000,000 ton-miles of freight estimated for 1953. Savings to shippers amounted to $12,000,000 in 1953.
Chemical-engineering Production		
6. Production of high-analysis fertilizers for experimental use on test-demonstration farms and for sale for educational purposes	None: chemical-engineering plants built during World War I were obsolete and inactive. Private industries produced almost exclusively products of lower concentrations.	Almost 3,500,000 tons of concentrated superphosphate, calcium metaphosphate, fused tricalcium phosphate, ammonium nitrate, and other fertilizers. Over 100 patents were granted for scientific and technical processes which are made freely available to private producers of fertilizers.
7. Distribution of TVA fertilizers for test-demonstration	None.	68,862 individual and area test-demonstration farmers have participated in experimental and educational uses of TVA fertilizers, most of them in the region. In addition, TVA fertilizers are used and sold for experimental and educational programmes in thirty-six states outside the Valley area.
Forestry Developments		
8. Fire protection	Totally inadequate except on public lands.	Organized state protection for 89 per cent. of 14,000,000 forested acres.

SUMMARY OF SELECTED KEY ITEMS OF PROGRESS IN THE DEVELOPMENT OF THE TENNESSEE VALLEY—*continued*

Measure of Progress	*1933*	*1953*
9. Production of seedlings for reforestation	No seedlings produced in the Valley area.	250,600,000 seedlings grown in TVA nurseries used to re-forest 211,710 acres in the Valley.
POWER		
10. Generation	1,500,000,000 kilowatt-hours.	Total of over 24,000,000,000 kilowatt-hours (14,000,000,000 from hydro; 3,000,000,000 purchased; 7,000,000,000 from steam). Approximately sixteen times the amount generated in 1933.
Rural customers	15,000 farmers served mostly from spur lines from urban centres; 3 per cent. of potential market.	423,000 farms served; about 90 per cent. of potential market.
12. Use in Valley homes	Average residential use of about 600 kilowatt-hours, which equalled the national average.	Average of 4,314 kilowatt-hours per residential customer; nearly double the national average.
13. Costs for power	Average rate 5·7 cents per kilowatt-hour.	Average residential rate of 1·3 cents per kilowatt-hour.
14. Installed capacity	About 814,500 kilowatts.	5,102,985 kilowatts; over 600 per cent.
INDUSTRIAL DEVELOPMENT		
15. Combined income from manufacturing in region (201 counties of Valley and power-service area)	1929: $226,000,000.	1952: $1,226,000,000, which is 442 per cent. increase as compared with a 405 per cent. increase for the seven Valley states and 282 per cent. for the United States.
16. Manufacturing employment (201 counties of Valley and power-service area)	1929: 222,000.	1952: 417,000, which is an 88 per cent. increase over 1929. This compares to a gain of 77 per cent. in seven Valley states and 54 per cent. in the nation. Income from manufacturing exceeds total agricultural income by a wide margin.

Summary of Selected Key Items of Progress in the Development of the Tennessee Valley—*continued*

Measure of Progress	*1933*	*1953*
Other		
17. *Per capita* income: Tennessee Valley region	1933: $163—44 per cent. of national average.	1952: $1,005—61 per cent. of national average.
18. Planning agencies	No state and only two city planning agencies.	Six state and sixty-five local planning agencies.
19. State park and recreation agencies	Two of seven Valley states had state park agencies; no state parks in Valley watershed.	All seven states have park agencies; states, cities, and counties are operating fifty parks; $3,000,000 spent for development in 1948 compared with $129,000 in 1936; 600,000 acres of water surface added; 10,000 miles of shore line.
20. Malaria control	28 per cent. of blood samples in 1934 had malaria parasites; some communities were as high as 60 per cent.	1953: for the past several years no case of locally transmitted malaria has been found.
21. Fish and game	Valley states employed ten fish and game technicians; spent less than $1,000,000 annually; estimates of catch not available.	Fish and game technicians numbered 120 in 1950; spent over $5,000,000 annually; number of fishermen multiplied 100 times on storage reservoirs and 25 times on main streams; catch of 7,000,000 pounds of game fish a year; commercial fishers take about 3,000,000 pounds of non-game fish a year.
22. Expenditures of state funds for major programmes in development of resources	1934: total spent for programmes in agriculture, forestry, wild life, water and minerals, and planning totalled $5,596,000.	1949: expenditures for the same programme totalled $30,682,000.

SECTION IV

TECHNIQUES AND METHODS

THERE is little which is novel in the educational techniques used in programmes of technical assistance. They are well-tried and widely-used practices of the traditional systems of many nations. The instructional and administrative problems which have to be faced include those of training teachers, preparing materials, administering and financing programmes, constructing curricular, selecting and advancing students, guiding and counselling personnel. The special educational tasks created by technical innovation and the need to fit people for the new life and its manifold problems which their technological advancement will bring are discussed in two general articles under *The Educational Instrument.* The main problems—and the methods of tackling them—associated with the training of skilled technicians and specialists of all kinds are then studied. Under *The Training of Skilled Personnel* Dr. Góes analyses the situation in Brazil. Case studies under *Education for Leadership* are of the American University of Beirut, the University Faculty for the Peoples of the Far North and the Jeanes School in Kenya. The fourth and fifth subsections are devoted to descriptions of *Overseas Training Programmes* and *Technical Assistance Programmes.* Under *The Influence of the Environment* there is an account of the Allied Military Occupation of Japan after the Second World War. Its significance lay not primarily in the control and reform of the formal educational system by foreign advisers but rather in the establishment of a controlled environment which touched all parts of Japanese life. The Occupation was itself a gigantic educational instrument. Dr. Mark T. Orr is well qualified to report on this experiment, and especially on that part which had direct impact on the formal educational system. First as an officer in the United States Air Force, later as a civilian, he headed the Education Division, in the Headquarters of the Supreme Commander of the Allied Powers during the early, crucial years of the Occupation. On the other hand, Mr. R. W. Steel discusses the limitations imposed on development and education by geographical conditions. Finally, the educational and social problems connected with the creation of recognizable and satisfactory incentives to action in development programmes are discussed under the heading *Incentives.*

THE EDITORS.

THE EDUCATIONAL INSTRUMENT

CHAPTER ONE

EDUCATION IN TECHNICAL DEVELOPMENT

THE most significant post-war developments in international relations are the release of vast areas and populations from colonial status and the introduction of ' technical assistance ' as a means of aiding these new nations to improve their lot. Heretofore, it had been accepted as a part of colonialism that the dominant Power should exploit the natural resources as well as the native labour pool, with little regard for the well-being of the colony. In general, the ' mother ' country undertook to provide a liberal education to a limited group of *élite* ' natives '; but assumed little obligation to provide opportunities for rudimentary literacy for the masses, or technical training for the intermediate group of employed natives. Thus, as the dominant Powers have withdrawn from administrative control of vast areas in Asia and Africa and permitted the establishment of indigenous governments, these new governments have found themselves unable to proceed with the exploitation of many of their resources for lack of trained personnel: and in many instances have faced the far more serious challenge to improve the conditions of health, sanitation, nutrition, and housing of the vast mass of their citizenry, whose well-being had been ignored previously.

In some instances neglect of the masses has reflected the belief of the colonial Power that it should be slow to overturn the traditional caste organization or property-ownership patterns existing in the colonial area.

Two factors now have impelled the technically advanced powers to do something to assist these new nations. First, has been an aroused humanitarianism, which has argued that no section of humanity should continue to suffer from disadvantages which technology can alleviate; second, an intensified consciousness that as these disadvantaged peoples become aware that they are suffering needlessly, their resentment will inevitably threaten the peace and stability of the world.

Conditions in Technologically Under-developed Areas

The United Nations Expanded Programme of Technical Assistance, the British Commonwealth's Colombo Plan, and the United

States programme of Technical Co-operation (Point Four) are the best-known efforts to meet the need. The magnitude of these plans should not obscure the importance of more limited efforts such as those of some of the Scandinavian countries in offering bilateral assistance to specific areas, or of Egyptian extension of technical help to other Arab states.

As the idea of technical assistance has grown, it has been recognized that it is not only the new nations that need help; many older independent states have lacked the developed resources to provide general education or adequate health and economic well-being for many of their citizens. And a careful examination of conditions in the more developed countries often reveals backward or under-developed areas or population groups—enclaves in the more generally prosperous mass.

Studies of the under-developed areas reveal a variety of conditions. Among the more common are: wasteful use of agricultural land; deterioration in quality of livestock and cultivated plants; exhaustion of natural plant cover without reforestation; failure to adapt native handicrafts to modern needs; failure to adapt agricultural and other tools to the need for greater efficiency; lack of technical knowledge or skill to exploit mineral resources; lack of efficient means or modes of transport; presence of one or more types of endemic disease which greatly reduce the physical efficiency of the working population; complete illiteracy or lack of basic education; absence of a literature designed to bring about an improvement in any of these conditions; the possession of religious or cultural beliefs which run counter to the acceptance of 'foreign' concepts which might correct some or all of these adverse conditions; a 'feudal' pattern of land ownership with exploitive rents and taxes which discourage self-improvement by tenant farmers.

In some instances, studies reveal that present conditions are the result of the imposition of badly assimilated modernization on an ancient culture: as for example in lower Egypt, where modern technology has substituted dams (or barrages) and irrigation ditches for the ancient seasonal flooding of the agricultural areas by the River Nile. The silt-laden flood-waters laid a fertile cover over the extent of the valley, which is absent from the modern canal water. Without adequate knowledge of the need to fertilize, the farmers have allowed the fertility of much of the delta land to decrease by as much as 40 per cent. in a quarter of a century. As even semi-tropical Egypt experiences chilly winters and millions of people depend on natural fuels for cooking, the absence of adequate supplies of wood results in the limited amounts of animal dung, straw, and corn wastes being collected and burned, rather than used for fertilizer. The rapid increase in population has resulted in an increased demand for fuel, and the reduced fertility of the land has made it

less able to supply food for the people. Thus technology appears to have complicated rather than corrected a difficult situation.

In other areas, the modern technologist has often recommended the introduction of mechanized agricultural equipment in disregard of the fact that the demand of the under-nourished local population for foodstuffs precluded the production of an agricultural surplus adequate to pay for the imported machinery and the gasoline to run it.

It is an easy fallacy to assume that a technological solution that has worked successfully in one part of the world will automatically work equally well somewhere else. Unfortunately, this has not proved true. For example, weather and soil conditions in Southern Thailand have so far defeated the efforts of sanitarians to handle the disposal of human wastes as is normally done throughout most of the Western world. And in the Muslim world, the Koranic injunction that the private parts be washed after evacuation has so far defeated efforts to stop the pollution of streams and ponds with human waste.

These instances are merely suggestive of the variety of problems encountered when a technician trained in one environment and culture attempts to transfer his skills to the solution of problems encountered in another environment and culture.

As should be evident, a technical solution is not adequate which involves only a modification of physical conditions, without preparing the people affected to accept and utilize the improvements with understanding; without training members of the local population in the operation, repair, and maintenance of the new tools, equipment, or installations; and without providing the economic means to support the operation, amortize the initial cost, and provide for replacements. Generosity which provides equipment without training people to care for it, or without foreseeing the means by which it can be replaced when worn out, may contribute to economic deterioration rather than to improvement.

It is therefore becoming increasingly clear that it is important to train specialists to participate specifically in development programmes, and that the permanent success of such programmes in the field depends on improving the educational level of the people served: and their careful training to take over the operation and maintenance of any programme which may be introduced.

Programmes of Technical Assistance

To get the various programmes of technical assistance started, it has been necessary to draw on the present pool of skilled technicians, selecting so far as possible those with some knowledge of the area to which they may go, those with linguistic skills that will enable them to communicate with the people with whom they will work, and those who will have the patience to train their local counterparts to

carry on successfully after they leave. The reservoir of such qualified specialists has been quickly exhausted: and as the world contemplates the continuation and expansion of the assistance programmes, it becomes clear that provision must be made for the specific training of future specialists for such work.

Such training should not be devoted to technical skills alone. These are important, but such skills themselves must be flexible and adaptable. Specialists must be taught to resist the temptation to do a quick and spectacular job without careful study to determine not only the physical conditions which must be surmounted, but also the psychological factors which will condition the success of their work.

Specialists who hope to influence large numbers of people to change their way of life must have some clear understanding of why these people behave the way they now do. It is important to realize that every culture ' makes sense ' to those who take part in it, and in the great majority of cases, a culture is an integrated unit of behaviour patterns which are mutually interdependent. Any permanent modification of group behaviour will depend on the new pattern being linked to and incorporated with the old. That can be done only if the international specialist is willing to take the time to acquaint himself with the pattern of existing beliefs and customs.

Those who attempt to disregard or to discredit elements within an existing culture pattern, without offering adequate substitutes, run the risk of wrecking the social machinery that makes the society function. Any culture, including one's own, is full of beliefs and practices which appear to an outsider to be inconsistent, yet such beliefs may influence the roles or the ambitions of many individuals within that culture. For example, in dealing with a culture in which the educated classes consider manual labour of all kinds to be beneath them—while the vast majority of manual labourers are uneducated—a modern technician encounters a serious problem. Most improvements which will affect the economy of the society demand knowledge or skill on the part of the manual operatives. The natural people to train would appear to be those who already have the educational background to understand the new techniques: but if these people won't apply them, such training is useless. On the other hand, if tradition dictates that those of the working classes who receive education or training automatically move into the class that abstains from manual labour, it is clear that a change in traditional practice is essential, and the important question becomes: How can such a change be brought about with the least, or most acceptable, modification of the existing cultural pattern?

It is useless to hope that any training programme for such international specialists within their home countries can be pin-pointed towards the solution of any specific problem or series of problems in an undeveloped area. Such training programmes, in addition to emphasis on flexible application of skills, must also provide some

study of applied anthropology which will lead to an understanding of how cultural and religious beliefs and customs operate within various societies; and the kinds of modifications in social behaviour which are possible. It is essential to learn that a frontal attack on such existing patterns is likely to fail, and will usually only arouse opposition, but that practically every culture has developed a mechanism of adjustment which permits the acceptance of irrational and inconsistent beliefs, if these can be properly introduced or sponsored. It is also important that such training incorporate a healthy respect for the intelligence of the people with whom the specialist will have to work, and a recognition of the fact that in many instances their behaviour is consistent with existing physical conditions, resources, or cultural beliefs, with which the well-meaning stranger is relatively or totally unfamiliar. Therefore, it is wise and important to find out why the existing practices are what they are, rather than to assume that they reflect stupidity or incompetence on the part of the populace.

Such training of personnel for work as international specialists must also include some understanding of leadership patterns, methods of group co-operation, and ways of enlisting interest in and support of programmes of change as they have been found to exist in various types of society.

It is doubtful if matters of this kind can be learned from books or from lectures. Success in field work, for the specialist, depends upon his *acceptance* by the people with whom and in whose interest he is to work. He must be able to discover which of a series of possibly desirable ends the community considers of sufficient importance to be prepared to work to achieve.

It must be recognized, to begin with, that technical assistance does not consist in what an international specialist does *for* people, but upon the things that he stimulates the people themselves to want so that they will co-operate to accomplish the desired end through their own efforts. Sometimes the improvements which a community will be found to be interested in are quite different from those which an outsider would consider important. However, the success of an outside specialist will often be measured, by the members of the community, by his ability to advise them successfully on how to get done the things they want to do. If he can do that, then they may be willing to accept advice about other things that need doing.

The best way to acquire skill in dealing with the people of a community is to enjoy a similar experience during a training period. Wherever possible, such an experience should take place under conditions resembling, so far as possible, those which will come later. They are exceedingly difficult to simulate in a college classroom or even in the typical college environment. This would indicate that arrangements need to be made by training institutions for a co-operative field experience, the major objective of which could be to

enlist community co-operation in the achievement of a group purpose.

Language Problems

It has been suggested above that such specialists should be able to communicate with the people with whom they are going to work. Ideally this would mean an ability to speak the language. As a matter of general preparation this is hardly practical, for work in under-developed areas often involves intimate association with people who have no written language: or where the local dialect differs considerably from the official language. In such cases, and they will be emphatically in the majority, it is essential that the specialist speak the most commonly used international language of the area, which may be French, English, or Spanish. A thorough mastery of one of these languages is essential: a working knowledge of one or both of the others is highly desirable. As most technical assistance is done in close collaboration with the government of the area involved, and depends for its success on active financial and personal participation by the local authorities, one basic requirement of such participation must be a competent bi-lingual interpreter. A good interpreter has two essential characteristics: (1) The ability to translate accurately and fully what is said by the specialist to the members of the community and what is said by the individual members of the community either to the specialist or among themselves about the contributions of the specialist. (2) Accurate knowledge of the area or the people concerned, so that he is able to interpret intelligently the proposals made by the specialist and the responses elicited. It is equally important that the interpreter should understand that his duty is not to select from the comments of either side, the things which he deems important to transmit. The specialist is entitled to know exactly how the people respond to his ideas: not what the interpreter thinks he should learn about those reactions. Interpreters who will do this are not easy to find. Most of them listen and then abstract what they consider important. Such translation service defeats not only the specialist but the well-meaning respondents in any co-operative project that requires mutual understanding. It may be necessary to train an interpreter to do the work of what might be thought of as a ' translating telephone ': but it is important to do so. Where the interpreter believes that informed commentary is necessary or desirable he should be encouraged to add this information, but to distinguish clearly his own ideas or advice from what other people are saying through him. Specialists need to learn the techniques of communication during their training period.

The average individual who has any linguistic skill can quickly learn to distinguish tonal variations, common expressions of concurrence or disagreement and many frequently used words or

phrases, and ultimately begin to use them in communication. The dependability of the interpreter increases as he realizes that the accuracy of his translations is being checked. Training in this skill is difficult to provide but may be of great importance.

Unless it is known in advance that a specialist will have continued experience in the Arab area, or in the Hindu-speaking part of India, for example, any effort to learn one of the more unusual or exotic languages is not recommended. Where a skilled linguist is available, some attention may usefully be paid to the basic grammatic structure of some of the more common language families. This will lay a foundation for learning to speak one of the dialects: or, more important, will be helpful in deciding the manner of presenting ideas which may not fall into the common patterns of thought in a given area.

Trainees and Specialists

The need for training institutions in the Western countries to develop successful programmes preparing people for work in the under-developed areas is not limited to training international specialists. The growing fellowship programmes, by which leaders from the under-developed areas are being sent abroad for training to assume specific responsibilities in their countries' development after their return, are placing a further strain on these institutions. It is not enough merely to prepare such fellows to operate the technical equipment of the Western world, which is a problem in itself. An added responsibility is to make this training functional to the governments which have sent the trainees. A case in point is a group of accountants sent by an Asian nation to learn modern methods. In the receiving country this involved the use of a number of complicated machines, which the home government did not possess and did not consider it could afford to buy. As a result, the training was worse than useless. In other instances, the standard of living of the country offering the training, and the conditions under which the training is given, tend to unfit the trainees to practise what they have learned on their return to less comfortable living conditions.

This last observation raises another problem in preparing international specialists. This is the necessity of conditioning them to be ready and willing to live under normal local conditions of the country to which they are sent. Too many specialists now being sent into under-developed countries are demanding special homes equipped with conveniences unknown to the local people, and insisting upon personal service which, in the countries concerned, traditionally characterizes the exploiting classes. Such special treatment, combined with the fact that the specialist is usually receiving a salary several times that of his local counterparts, inevitably raises barriers of doubt and distrust on the part of the people whom he

has come to help which may prove difficult or impossible to eradicate. Quite understandably, citizens of recipient countries often argue that someone so completely out of touch with them and their experiences is not likely to make recommendations that would be understanding or helpful. It is recognized that successful specialists in the Western nations have spent a lifetime in achieving their present standards of living, and that the under-developed countries are naturally demanding the services of specialists who through age and experience have become nationally or internationally known experts in their specialities. It is therefore asking more of these specialists than that they withdraw for a period of time from their chosen field in their home country to be of help to their less fortunate brothers elsewhere, but that while doing so, they accept discomforts and, in some instances, health hazards, in order to succeed as Good Samaritans. For example, in many Asian areas, the countryman is a generous host. The visitor to his door must accept the generosity of a pot of tea, a cup of coffee, or some other native concoction. None of this food has been prepared according to sanitary practices, and probably the cup or glass proffered to the guest has been used by someone else—or shortly will be used by another—without benefit of washing: but no greater insult can be offered the host than to refuse his generous gesture. Which must come first: an honouring of traditional courtesies which may win friendship and co-operation, or a prudent refusal on sanitary grounds, which will probably give serious offence and alienate support? It is sometimes as simple as that, and the man or woman who enters training for international service had better know the answer before wasting time in technical training.

It has been suggested that several institutions in each country which is undertaking the preparation of international experts combine to develop a practical training programme in some less-advantaged area within its own country, where the students' living-level would be similar to that of the population with which they are preparing to work, and that the criterion of success of their training be the demonstrated ability of the students to enlist the co-operation of the local population in the execution of some practical project for community improvement, mutually agreed upon. So far, such a practical training programme is still largely in the discussion stage. It might be somewhat similar to the training programme for the British Colonial Service, which requires the student to spend a period of time in the field after a highly specialized but theoretical training in needed skills. This helps to develop a skilled corps of persons who have demonstrated the ability to live with the bedouins in the desert, or with members of a remote African tribe in their tropical forests. The vastly more complicated programme of international technical assistance certainly deserves as careful preparation for the specialists who will take part in its increasingly important work.

National Training Schemes

Regardless of what solution is ultimately found for training the foreign expert to participate effectively in technical-assistance programmes, the permanence of the improvements which may grow out of such assistance depends upon the training of a national staff in each country who can collaborate with the outside specialists and who can also initiate and carry on similar programmes of their own.

Several significant plans are now under way for the training of such national workers. Probably the most carefully thought-out and most promising was the proposed establishment of international training centres for specialists in fundamental education launched in 1950 by UNESCO. This was a bold and imaginative plan for a network of such training centres in key areas of the world, which might, over a period of ten years, produce five to six thousand leaders who would return to their own countries and participate in the establishment of similar national centres: or take part in pilot projects to extend the advantage of fundamental education to selected areas or population groups.

Several committees of experts agreed that the operation of a fundamental-education training centre for a student body of two hundred, who could be in training for from eighteen to twenty-one months, would cost about $450,000 per centre per year. Such a programme was inconceivable within the very limited budget of UNESCO and the other agencies, but Dr. Torres Bodet, the Director-General of UNESCO, who initiated the programme, believed that he had the assurance of adequate outside contributions to proceed with the plan.

The first such centre, launched at Patzcuaro, Mexico, in April 1951, is described elsewhere. It early became evident that the private agencies towards whom UNESCO had hopefully looked for financial backing were not convinced that the project justified support. However, the Expanded Programme of Technical Assistance stepped into the breach, and through UNESCO, WHO, FAO, ILO, and the United Nations' Welfare and Housing Sections financed the international staff and furnished fellowship assistance for one hundred students annually.

The Government of Mexico had early indicated its readiness to furnish a site for the centre and other operating essentials. Former President Lazaro Cardenas donated his former home and its beautiful grounds, and the government financed the erection of the necessary buildings and supplied the transportation equipment: no small item. The Organization of American States also underwrote the programme to the extent of $40,000 per year. The Patzcuaro Centre has carried on for three years, graduating a total of more than one hundred students, most of whom have already been placed in similar work in fundamental education in their own countries.

The 1951 Annual Conference of UNESCO authorized the establishment of a second centre, and after serious consideration the executive board accepted the offer of Egypt to act as host and invited the Arab states to send students to the second centre, which was opened at Sirs el-Layyan in Egypt in December 1952. Here again the technical-assistance programme bore the major share of the international staff cost and the student maintenance charges. Five Arab states—Egypt, Iraq, Lebanon, Saudi Arabia, and Syria—were invited to participate in the opening class and a favourable response was received from all. In addition, five students were received from the Arab refugee camps at Gaza. For the second enrolment in the winter of 1952–3, Libya and Yemen also asked to be admitted.

In addition to the training aspects of the programme, both centres have placed a great deal of emphasis on the production of material of instruction for illiterates and new literates: films, film strips, primers, and simple readers.

With the disappointing reduction in technical-assistance support from the various nations, it appeared early in 1954 that some curtailment of this worthy and necessary programme may become inevitable.

On a much less significant scale, the Food and Agriculture Organization, the World Health Organization, and the UN Social Affairs Section have undertaken programmes for the limited training of special-purpose or multi-purpose workers.

On a national level, the U.S. Technical Co-operation programme and the Ford Foundation, both in India, have recognized the necessity for trained local leadership and have organized leadership-training programmes for community workers of a considerably more limited type.

UNESCO technical assistance has also given limited assistance, through the services of international specialists for limited periods, to the establishment of national training centres in fundamental education in Ceylon, Liberia, Iraq, Honduras, and Thailand.

Conclusions

The chief difficulty underlying all the national and international training programmes is the fact that they have been starved of adequate financial support.

This lack of support has reduced the scale of these training programmes, and resulted in an attempt to transmit skills to illiterate or semi-literate trainees in a much shorter period of time than would be thought adequate to prepare well-educated Westerners for similar responsibilities. There is a grave danger that this superficiality of training may have grave repercussions within the under-developed countries when it becomes clear that such ‘ leaders ’ are ill-prepared to offer wise leadership.

Here and there, some of the great Western corporations which are

engaged in developing the natural resources of some of the under-developed areas have recognized the desirability of training the residents of the area where they are working to carry on many of the unskilled and skilled operations which are being undertaken. The Arabian-American Oil Company,[1] operating in Saudi Arabia, is a case in point. Its records show that the technical schools which it maintains in connexion with its work have taught reading and writing and many basic skills to about thirty thousand Arabs of the area, and have given advanced training leading to promotion to a smaller but able group of Arabs. This training programme has not only benefited the company itself, and permitted its operations to become increasingly staffed by Arabs, but its trainees are to be found to-day engaged throughout the Middle East in many activities that are possible because of the training which they have received from the schools and shops of this company.

The most discouraging news which has come out of the financial disappointments of the Technical Assistance Board has been the reported decision that projects must be limited to those which show promise of economic development within a minimum time, and that most programmes of education or social welfare are not deemed to fall within this classification. Many of those who have worked intimately with the peoples of the under-developed areas believe that in order to direct their steps effectively towards their own development, they must be helped to understand the principles on which Western skills are based, must be trained how to use, maintain, and repair the machinery which has multiplied Western horse-power, and must be taught to communicate through reading and writing so as to continue whatever growth may be initiated. This takes time, and is a long-range programme: but without it, most of the short-range programmes of 'economic development and improvement' will bog down in ignorance, and result in further frustration of peoples, many of whom already believe that their more successful neighbours are keeping something from them.

WILLARD W. BEATTY.

[1] Described in Section V, Chapter 8.

CHAPTER TWO

EDUCATION FOR SOCIAL ADJUSTMENT TO TECHNOLOGICAL CHANGE

THE obvious role of the educator in technologically under-developed areas is that of the innovator who teaches, aids, and stimulates people to adopt new methods and to learn new skills. It is a role which demands far more of him than a purely technical knowledge of the methods and skills he desires to teach. He needs to be sensitive to the values of the people among whom he works, and to their social groupings. He needs to understand how the values and customs of the people, and the people themselves, are linked and patterned in relation to one another. And he needs to be aware, too, that his success or failure may be largely determined by the kind of relationship he establishes between himself and the people he desires to influence. The person and behaviour of the educator, the nature of the innovations he presents, and the channels through which he introduces them must all be made acceptable to the people if they are quickly and readily to respond in the desired way. It is for this reason that progressive innovating agencies now stress so much the teaching of human-relations skills in their training programmes. The recently published case-book entitled *Human Problems in Technological Change*[1] admirably exemplifies a modern approach to training of this kind.

While it is true that a good training in human-relations skills will help innovators to work more effectively than by cruder methods which are not well adjusted to people's existing values and relationships, yet for that very reason it raises more acutely problems of another kind. The more successfully the innovator works—that is, the more far-reaching the technological changes he induces people to accept—the more acute will tend to be the stresses which may develop in their relationships with one another. Most technological changes disorganize human relationships to some extent, and they may also weaken or confuse the people's loyalty to their ordinary standards of conduct. This is natural and inevitable, but it does face the educator with the task of helping people to adapt their existing relationships to new purposes, or to readjust to new relationships with one another. If he succeeds, the end-result of change

[1] (Ed.) E. H. Spicer (Russell Sage Foundation, New York, 1952).

is a form of social reorganization well adapted to people's needs and to the new technology. If he fails, the social disorganization which accompanies the new technology may finally degenerate into social disintegration. In this case material benefits will have been bought at heavy social cost. Desirably, therefore, technological change should lead to social as well as to material development, and both the innovator and those who train him should be as much concerned with the one as with the other.

Inter-Group Relationships

It is now recognized that the innumerable small face-to-face groups in which people live and work are very important both to individuals and to the society to which they belong. It is through these groups that individuals develop their personalities and acquire their sense of values. It is by ' belonging ' to such groups, too, that people get some basic feeling of security from relating themselves to others in an intimate, personal, and meaningful way—and hence it is through such groups that individuals achieve whatever sense of belonging to society they ever acquire.[2]

Major technological innovations, such as the establishment of large-scale industry, must obviously radically affect the group life of large numbers of people. For instance, the Volta River project on the Gold Coast and the big electrification scheme at Jinja in Uganda will ultimately attract many men and women away from their present communities and bring them arbitrarily together into new, and initially much less meaningful, relationships than those they previously enjoyed. Such men and women will be faced with the task of developing and adjusting themselves to a whole new set of relationships to take the place of those they have lost—temporarily in the case of some, and permanently in the case of those who do not return to their villages.

In Rural Development

But even in rural areas which are little affected by such major developments, quite small innovations, such as the introduction of a new tool, a new crop, or a new method of growing an existing crop, may have far-reaching effects on people's attitudes and on their relationships with one another, so that the small, face-to-face groups with which we are concerned are weakened, disorganized, and possibly disintegrated. This difficulty, moreover, is aggravated whenever the innovator is tempted to appeal primarily to the individual and to the individual profit motive in order to get his innovation accepted. This appears to have been the case, for instance, with the peasant farming project in the eastern province of Northern Rhodesia, where individual peasants are encouraged to leave their

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[2] "Autonomous Groups and Mental Health", *Autonomous Groups Bulletin*, Vol. III, No. 4.

neighbourhood groups in order to launch out on their own under the tutelage of the agricultural department.[3] It has also been the case in Northern Ireland. There, as Mogey notes, government attempts to control the rate and direction of agricultural change by legislative and administrative action have led to the destruction of the old, mutual, self-help patterns of relationship in flax pulling and harvesting, to the virtual disappearance of the co-operative creameries, and to the rejection by the people of vocational educational schemes planned for their benefit.

> This may be due in part [he says] to the adoption of paternalistic compulsion in the marketing of the products of the farm; but some of the resistance is also a consequence of the failure to preserve and work through the informal groups which existed in the countryside.[4]

In practice, the disorganization of social relationships caused by technological change faces the educator with two main types of problem. In many under-developed areas people are still well integrated in their societies, and here the problem is to introduce change in such a way that the people's existing relationships are satisfactorily adapted, and perhaps even strengthened, in the process of accepting it. In this case, technical innovation and social reorganization go hand in hand and, if successfully carried through, there is no end-result of acute social disorganization to be separately dealt with. But we have to recognize, in fact, that much technological change has already occurred, even in under-developed areas, and that it has frequently been brought about by innovators who were either unconscious of its social repercussions or who did not feel responsible for dealing with them. Here the social educator is faced with an end-result of change which has already taken place. He has to deal with a society already disorganized or disintegrated, and his main job is to assist people to establish new, meaningful, and satisfying relationships to replace those which have already broken down. He has to help people, as it were, to grow new social tissue by forming new groups: or, where such groups have already formed, to assist them to adapt themselves to the conditions of the new environment and to the other groups which may also be developing within it.

There are many instances of technological change being successfully introduced without disrupting people's social relationships. In all such cases the innovator has worked with groups rather than with individuals, and to further the group's own purposes rather than to carry through some preconceived specific innovation of his own.

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[3] H. H. Thomson, "The Peasant Farming Project in the Eastern Provinces of Northern Rhodesia", *Community Development Bulletin,* Vol. II, No. 3, June 1951.

[4] J. M. Mogey, "Characteristics of the Rural Community in Northern Ireland", *Rural Sociology,* Vol. 18, No. 3, September 1953.

The group's felt want was the key factor. If this already existed, he stimulated the group to plan and act to satisfy it, and helped it to overcome the practical difficulties it encountered on the way. The developments which have taken place in the Udi District of the Eastern Region of Nigeria well illustrate the innovator working in this role. There, small and rather backward communities—stimulated originally by a mass literacy project—have selected and undertaken all kinds of local projects; and have thus provided themselves with schools, reading-rooms, co-operative shops, markets, maternity centres, clean water-supplies, and even leper villages. In relation to all these developments the function of the external agent, in this case the District Officer, was to give such schemes his blessing, to show interest in the projects, to stimulate people further by giving them news of successful projects in other villages, and to help with technical advice and with scarce materials which the community could not provide out of its own unaided resources.[5]

Udi, however, is an unduly simple example, for the Udi communities already knew what they wanted and were socially well organized for common action. The technological innovator, who is also a social innovator, meets his real problems only when he seeks to stimulate apathetic and semi-disorganized communities. At the start such communities have neither a common purpose to stimulate them to action nor the capacity to act co-operatively together as a group; and the innovator has to help them both to identify and define their wants, and to develop co-operative attitudes and relationships. This has been the initial task of the innovator in, for example, the Antigonish movement in Nova Scotia [6] and in the extension programmes of the Puerto Rican Division of Community Education.[7] In both cases the basic steps have been the same: first, to stimulate people by encouraging them to study and discuss their needs; second, to encourage them to define specific wants which they can meet by working together on practical projects within the community; and third, to service the community with whatever technical skills and ' know-how ' it may then require to carry out successfully the projects it has decided on.

In this kind of development, social adaptation and technological change go hand in hand, but always the *process* of change is more important than its material *product*. This makes for slow and seemingly formless work. In Puerto Rico, we are told, months of talking may go by with nothing visible to show, but it is the theory of the Puerto Rican agency that these ' interminable ' months are

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[5] E. R. Chadwick, " Communal Development in Udi Division ", *Oversea Education*, Vol. XIX, No. 2, January 1948.

[6] E. Arsenault, " Social Progress in Eastern Canada: the Antigonish Movement ", *Fundamental and Adult Education*, Vol. IV, No. 4, October 1952.

[7] " Community Change: An Action Program in Puerto Rico ", *Journal of Social Issues*, Vol. IX, No. 2, 1953.

not a waste of time, but, on the contrary, the very web and texture of community development. It is during these months that the people move from their old habits of thought and custom, explore their needs and their environment, develop understanding of their neighbours, and orientate themselves to work *together* for change. These things take time, but it may be that time is a price that we must pay if we value social well-being as much as material development.

Unfortunately, however, the innovator cannot always work in this way, for many changes, e.g. in mining, transport, and large-scale industry, originate outside the small community, but ultimately affect it—sometimes by disorganizing its internal relationships, and sometimes by attracting people away to industrial and commercial centres.

This is essentially the situation which had developed in Kenya. The young Kikuyu male was formerly a warrior. He was not expected to till the fields, and was not entitled to land until his warrior days were over. The British imposed peace, but they could not *impose* a change of men's conception of themselves. The young men are still without land and, since they have no fighting to do, find themselves with little reason for existence.[8] These people have to be helped to adjust themselves to the new situation the British have created for them, and it is not merely a problem of changing the attitudes of the young men, but also of the elders and the women. Here again the task is being tackled by methods basically not dissimilar from those used in Nova Scotia and Puerto Rico.

Under Urban Conditions

But what of the people who migrate to the towns? Such people cut themselves off from all their former day-to-day relationships and enter a chaotic social environment in which none of their small community values, attitudes, and sanctions necessarily apply. However, they do not remain completely disorganized for long. Usually and quite rapidly they develop spontaneously some sort of group life, inadequate though it may be, both at their place of work and in the neighbourhood in which they live. The groups thus formed are small and quite informal, but as growing-points for social reorganization they are very important.

Until recently, comparatively few technological innovators and social workers realized this. They were engaged in planning *for*

[8] "Strangers to the country are shocked to see old women bowed down under huge loads of firewood, while the young bucks stroll along, their hats tilted, making no effort to help them" (Tom Askwith, "The Young Kikuyu", *Corona*, Vol. V, Nos. 1 and 2, January and February, 1953. This article gives an excellent statement of the problem and of the work so far done in coping with it).

people rather than *with* them. They thought of people either as aggregates of individuals, or as members of formal organizations, and they rarely attached importance to their membership in small, informal groups. Social agencies worked mainly to attract and influence people as individuals and had little influence except on the isolates or near-isolates who joined their programmes in search of friends they had failed to find for themselves.[9]

Similarly, industrial managements aimed to organize individual workmen for maximum production in the most streamlined and efficient way possible—as management saw it—without much regard for the informal relationships the workmen had established among themselves. By acting in this way, they tended continually to weaken and disrupt informal organization and thus to hinder social growth and adaptation.

A recent development in Tanganyika, however, to give but one example, helps to show how an alert social agency can work very effectively by serving small, informal, emergent urban groups. An adult-literacy scheme was launched in Dar-es-Salaam in 1952, not in the Government Welfare Centres to which the people would not go, but in the outlying urban neighbourhoods where the town labourers lived. The scheme went well, and four months later thirty-six out of the seventy people who had joined a class at Kinondoni—one of these neighbourhoods—passed their literacy test.

People of twenty-three tribes belonged to this group, and its subsequent history was remarkable. Hitherto, they had been content to meet under a tree. Now, fired by their success, they determined to learn English, but first they set to work to build themselves a school and furnish it, while the Social Welfare Department did its utmost to encourage them.

> The new school was made a listening point for the radio service. The " Graduation Ceremony " was recorded and broadcast on the news and the names of those successful in the literacy tests were announced on the radio. Photographs of the group, of the opening day, and of individuals were taken and prints sold at a subsidised rate to each member of the group, and the local press published a full-page illustrated article on " The Kinondoni Adult School." [10]

With this encouragement the group prospered, and soon there was further evidence of social growth. The people cleared a football ground, bought equipment, and formed football clubs to play teams from other neighbourhoods. They no longer opposed, but now encouraged, the education of their womenfolk. And they organized a sports and social day to which four other neighbourhoods were

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[9] See H. H. Doddy, " Inquiry into Informal Groupings in a Metropolitan Area (with Implications for Adult Organization for Community Improvement) ", *Autonomous Groups Bulletin,* Vol. VI, No. 4, 1951.

[10] J. L. McGairl, " Urban Community Development through Adult Literacy ", *Community Development Bulletin,* Vol. IV, No. 4, September 1953.

invited. It seems that in towns as in the countryside the social organizer best promotes social growth when he directs " his efforts towards facilitating processes of growth within the community rather than imposing upon it an externally devised program of change." [11]

Many authorities now claim that much the same is also true of the factory situation. They note that employees at all levels tend to come together into informal groups; and that it is by managements recognizing their existence and working with them, rather than imposing change upon them and disrupting them, that the objectives, both of industry (efficient production of commodities) and of society (good social adaptation of technological change), are served best.[12]

Training and Social Development

In each of the cases I have mentioned, the technological innovator or the social organizer has orientated himself to people in basically the same way. He works with groups rather than with individuals. He is as much interested in maintaining and developing social relationships as in producing specific material change. He seeks to serve the group's purpose rather than to impose his own. And, where a group lacks purpose, he stimulates it to take the initiative in its own development, not suggesting any one single measure to be taken, but throwing out ideas, pretending to no pre-fixed convictions of his own, and acting as a 'catalyst' setting in motion the activity and resources of the group.[13] In short, he stimulates *group* directed activity by maximizing " situations in which the individual . . . can participate fully and on terms of equal status in projects of joint concern to him and his associates."

The training of good social-development workers in this sense involves far more than instruction and practice in working with groups. The trainees must learn to value 'process' more than any specific material result, and to go on valuing it in spite of the criticism of superficial observers that no results are being achieved or that 'progress' is too slow. This is a value that it is easier for a man to accept intellectually, and give lip-service to, than to practise faithfully in the field, especially if he is a well-trained specialist working among a 'backward' people. He may all too easily assume that he knows better than the community what is good for it, and may tend, therefore, to see his job as one of persuading or manipu-

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[11] M. B. Treudley, "Community Structure and Organization", *Journal of Educational Sociology,* May 1946.

[12] For a valuable recent study of the importance of small informal groups in industry see J. F. Scott and R. P. Lynton, " Three Studies in Management " (Routledge and Kegan Paul, 1952). For a short, general article on this topic see E. D. Chapple, " The Natural Group in Industry ", *The Journal of Educational Sociology,* May 1946.

[13] See V. L. Griffiths, " The Field Worker ", in *Approaches to Community Development* (ed. P. Ruopp) (Van Hoeve, The Hague, 1953), pp. 219–21.

lating people to accept the specific changes which he sees as good. It is hard for him to subordinate his own knowledge to the judgement of the group. As Treudley says:

> It is easier . . to accept scientific findings that can be used in the manipulation of individuals or groups than it is to consider the creation of settings in which such persons can educate themselves.[14]

To some extent this basic difficulty can be overcome by applying psychological techniques to the task of selecting men and women with suitable aptitudes and temperaments for this kind of work.[15] To some extent, also, it can be dealt with in training.

The essence of the approach in training is that the trainer should develop the same kind of relationship with his trainees that he hopes they will develop with the groups with whom they work. This relationship must allow of very free and open discussion. Trainees will not necessarily accept, for practical application, ways of working with people which the trainer does not exemplify in the way he works with them. Each training group needs ample opportunity to frame its own philosophy, to formulate its own values, and to examine the agency's aims and objectives for itself. This principle is already well recognized on many training courses for voluntary leaders, but it is less well established on training courses for professional workers. Many senior agency administrators may feel that since the trainees are being paid they are there solely to learn and do what they are told. They overlook the fact that no agency can buy more than routine work, and that the agency must be ready to welcome comment on practice and even on policy from its subordinate workers if it wishes to develop a high morale among them and enthusiasm for its work.

This is a hard pill for some administrators to swallow, particularly in those agencies which are more concerned with directing change than with social development. As one reads about training schemes, one feels that some agencies are, in fact, too much preoccupied with instructing their workers in content and method and too little with problems of morale and attitude. Yet selection and training programmes which ignore them are fundamentally wasteful and inefficient, however superficially efficient they may appear. The trainer who aims at securing the full participation of his trainees, and at developing their initiative, is faced with the same basic problem that faces the field worker in the community—he must work with,

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[14] M. B. Treudley, *op. cit.*

[15] For a good discussion of this problem in relation to foreign personnel see T. S. Simey, *Welfare and Planning in the West Indies* (Oxford, 1946), pp. 239–49. For examples of the careful application of selection techniques to local personnel see *Pre-Selection Training of Gaon-Sathis*, Despatch No. 3. Allahabad Extension Pilot Project, 1952, and "Community Change: An Action Program in Puerto Rico", *Journal of Social Issues*, Vol. IX, No. 2, 1953, pp. 27–41.

rather than for, and help rather than direct: and he must be ready to 'waste' time on non-material things at the expense of some of the time spent on instruction. The time is not wasted if he thereby provides his trainees with a real and personal understanding of the kind of non-directive but stimulating relationship they can establish between themselves and the people with whom they will work.

But we have to admit that however successful the trainer may be during the initial period of training, the effect is not likely to last unless training of the same kind continues throughout the field worker's service. Indeed, the field supervisor provides the most valuable of all training experiences when he meets his field workers informally to consider policy, to plan programmes, and to examine methods of work in the light of the field experience already gained. Such conferences, once the supervisor has himself learnt how to work as a member of a team rather than outside and above it, provide the most effective of all training situations for the supervisor and the field workers alike. They maximize opportunities for discussing real 'on-the-job' problems; they pool the varied experiences and insights of individuals for the benefit of all; and they lead to decisions for which every individual member of the group feels responsible. Above all, and more than in any other way, they develop in subordinate workers those qualities of responsibility, initiative, respect for other people and skill in working with them, and pertinacity in the face of difficulties which are so often lacking in the field worker operating at the lowest, but all-important, 'grass-roots' level in the community.

T. R. Batten.

THE TRAINING OF SKILLED PERSONNEL

THE industrialization of Brazil is an economic and political event of major importance which has not been adequately appreciated by European nations preoccupied with their own recovery following the Second World War. Yet such an event in a nation having a population greater than the United Kingdom, with a land area greater than the United States and Alaska combined, and with almost incredible riches in raw materials is almost certain to alter the power balances of the major nations of the world in the course of time.

The figures are startling. Between Brazil's entry into the First World War and its entry into the Second, its volume of manufacturing increased by 2,000 per cent. But such an increase, impressive in percentage, was less so in volume, since the nation's manufacturing in 1917 had been negligible. The world, and even the Brazilian people, long accustomed to a single-product agricultural economy—first of sugar, then rubber, finally coffee—were hardly aware of the gradual increase of industry. But by 1942 the production of industry and of agriculture, measured in terms of money value, was almost exactly equal. The next six years, with domestic consumption rising and outside sources largely cut off by the war and the post-war European recovery programme, Brazil was forced to build an industrial economy to meet her own needs. In those six years Brazilian industrial output increased 400 per cent., until by 1949 the nation's income came 80 per cent. from industry, and only 20 per cent. from agriculture. It is to-day a nation filled with achievements that rival the best of the Old World. Disregarding the Soviet Union, where statistics are not known, it ranks second in the world in commercial aviation, exceeded only by the United States. It has provided cities which surpass some of the greatest in Europe in construction. Until the recent completion of a major plant in the United States, its Volta Redonda steel mill was the largest in the world. Its hydro-electric power developments are massive, and their impact upon society is not yet fully realized. Brazil is rapidly becoming a major technological power.

The training of personnel for this swiftly expanding industrial structure has been largely solved by the *Serviço Nacional de Aprendizagem Industrial* (SENAI), a co-operative effort by Brazil's private industry. This organization is mainly the product of the imagination and unflagging efforts of Dr. Joachim Faria Góes Filho, its National Director, who has written this article. And as a sidelight on the expected channels through which major technological development takes place, Dr. Góes once recalled that the idea originally came

while he was a student in a course on foundations of education in an American university, and there for the first time caught a vision of the way in which the instrument of education could shape and modify society, a concept to which he has since dedicated his life.

THE EDITORS.

CHAPTER THREE

TECHNOLOGICAL DEVELOPMENT AND EDUCATION IN BRAZIL

BRAZIL'S typically agrarian social and economic structure began to undergo important changes during the nineteenth century. Previously, our society had been divided into a class of landowners on the one hand and their slaves on the other or, after the abolition of slavery, into the landowners and their tenants, sharecroppers, labourers, and so on. Most of the people lived in the country, tilling the soil with primitive tools. The quality of the power they used was poor; carts were drawn by mules or oxen; boats and canoes were the only means of transportation. Environmental conditions made for a low level of production which, in turn, resulted in low standards of living and little national wealth.

Naturally under such conditions there was little demand for schools. Planters, cattle-breeders, miners, and those engaged in ancillary occupations received their education from their parents, who would pass on to them what life itself had taught them with regard to soil cultivation, sowing and harvesting, the handling of cattle and tools, and so on. All this was practical knowledge. The three R's were useless to these country folk, nor could formal schooling have offered them any training meaningful in terms of their agricultural or mining activities. The small rural communities were merely centres for the exchange of produce and for the acquisition of necessities. These transactions certainly demanded some familiarity with measures and money, as well as some skill in adding and subtracting; however, they were often acquired in the course of the commercial process itself.

The elementary schools in these centres served only the few heading for employment in small local business establishments, registries, or tax-collection offices. For artisans, too, were apprenticed in the little workshops of the shoemakers, tailors, hairdressers, bakers, or carpenters. For the rest, the simple life of these communities and the narrow range of their activities made possible direct cultural transmission down the generations through the agency of Church and family. Thus the elementary school appeared somewhat artificial to the majority of country folk. The exceptions were those

few we have already mentioned and a few others who, once they began to consider themselves educated, migrated to the towns.

The various state capitals were the only centres showing any growth of intellectual or business and administrative activities. In urban society doctors, judges, lawyers, and civil servants tended, on the whole, to belong to the upper economic groups. Political life, in a way typical of a society based on an agrarian economy, was dominated by the representatives of the *élite* who occupied positions of leadership in government, parliament, and the highest levels of the administration. Admittedly, there have been cases of men of the people rising to the highest posts. But they were exceptions, self-made men of outstanding ability. The only institutions of higher learning were the two law schools of Recife and São Paulo and the two medical schools in Rio de Janeiro and Bahia. These schools themselves represented a great step forward; before their foundation the candidates for certain careers had been forced to go to Coimbra to study. It is true, however, that the small number of schools and the limited possibilities for study were fully in accordance with the smallness of the *élite* they served. As a result, erudition became the main object of these schools. Verbal brilliancy was of great importance to social advancement. For this society functioned through simple, rather than complex technical, processes.

The sole purpose of the secondary school was to prepare its pupils for admission to the institutions for higher education. Thus the number of secondary establishments required was small; most of them were private boarding schools, for many of the aspirants to higher posts were the sons of plantation-owners. Later, one government *ginásio* was set up in each of the State capitals. Curricula were eclectic and extensive, with a marked bias towards classical studies. The educational system did not aim at providing equality of opportunity nor at equalizing large social differences.

An agrarian society so poor in technological resources was bound to be static. There was little socio-economic mobility, especially among those who worked on the land. The landowners, on the other hand, formed in practice a closed group, their powers and privileges being strongly protected by juridical institutions and tradition. The fact that there was little communication with other cultures restricted the possibilities of an enriching change of ideas; and the defensive and conservative nature of social institutions tended to perpetuate patterns of habit, attitudes, behaviour, and the like. Cultural change was very slow; and the maintenance of social stratification was an essential feature of this static society.

The Break-up of the Static Features of the Society

Co-existence of Various Stages of Development

The new technological developments and the increase in popula-

tion resulted in a significant expansion of urban life. This in turn led to social changes which are perhaps still in their initial phase. In the big towns, as, for example, Rio de Janeiro, São Paulo, Porto Alegre, Belo Horizonte, and Recife, a new class of factory workers emerged. On the other hand, employers, too, grew in number. Both groups organized themselves into syndicates and federations, which are beginning to extend their activities beyond labour-management relations into the political life of the country. Moved by a spirit of adventure, a number of pioneers have reached a high degree of prosperity; great fortunes have been accumulated in some of the large towns, and powerful men of action have emerged in the business sphere. There seems to be an acceleration in the rate of capital accumulation. The rapid growth of a large internal market with an increasing demand for consumer goods is speeding up the process of industrialization. Problems of class interests, disputes, and agreements are being dealt with through the official channels between the two large groups. In accordance with the trends of our time, the State has been intervening in this incipient process; its attempts to regulate labour and employment relations are perhaps in advance of the natural course of development.

The growth of urban life appears to lead to the break-up of the static features of the old society, resulting in a slow but steady expansion of the middle class, thanks to the social rise of working-class youth. This phenomenon seems to occur whenever technological development leads to an increase in a country's productive capacity and to the creation of a large number of openings in business, industry, and transport, which are then filled by established or aspiring members of the middle classes. Moreover, the extension of public utilities due to economic expansion creates many administrative jobs which are also filled by the middle class. Lastly, there is the case, already referred to, of ex-employees in business and industry who have turned small employers themselves, thus achieving middle-class status. More than 80 per cent. of Brazilian industrial employers are of this type. In our opinion, it is precisely this upward mobility that determines the dynamic character of the new urban society.

However, the speed of rural development has not kept pace with urban expansion. Even in those areas that have shown the greatest agricultural progress there has been much less mechanization. It is true that the cultivation of rice, beans, manioc, potatoes, maize, and coffee has increased sufficiently to supply, under normal conditions, the internal market. This increase is particularly noticeable in the States of Rio Grande do Sul, Paraná, São Paulo, Minas Geraes, and also, as regards the supply of sugar, in Rio de Janeiro and Pernambuco. The extraction of vegetable oils and timber, the cultivation of cotton, cocoa, tobacco, and, above all, coffee, constitute the basic elements of our present agricultural export trade. On

the other hand, a considerable number of roads have been built in the more productive States during the last thirty years. An even more important development has taken place in airlines, which not only link practically every town with the larger centres but also constitute the only means of transportation to certain remote parts of the country.

There is no doubt that technological progress in Brazil over the last forty years has been highly significant; yet one is struck by its lack of homogeneity. There are large differences between the great industrial centres on the one hand and the country on the other, between prosperous agricultural areas and areas that are exposed to droughts or wholly dependent on mining and agriculture. A large proportion of the rural population still lives in areas where the only sources of power are the muscles of men and animals; and the rates of production and consumption of these people are very low. Thus, while certain urban centres are undergoing rapid and sometimes violent cultural and material change, transformation is slow in extensive areas of the interior. This phase of transition, marked by the co-existence of different economic, technical, and social stages of development, is the by-product of a socio-economic process in which human conditions and material resources have not yet been adequately balanced.

The Emergence of the School in the Phase of Transition

The Brazilian school reflects this phase of transition in many ways. The growth of the population in the towns increased the demand for all types of education. In order to meet this need, many of the States of the Federation set up new elementary schools. However, the financial and human resources mobilized do not meet the demand for even more elementary schools for the masses. Hence a large proportion of children of school age have been barred from school attendance. The shortage of schools in the larger towns made the introduction of a system of two or three shifts necessary. Thus periods of instruction were reduced to four and a half and often to three hours per day. This restricted school work to the teaching of the three Rs.

Besides the limited time-table there is a great deal of absenteeism from school, which is particularly serious at the elementary level. In the large cities, pupils stay at school for an average of three years; in the smaller towns, the average is not more than two years. In addition, there are great shortages of adequate buildings, furniture, teaching materials, and teachers. Supervision in the sense of guidance and advice to teachers is lacking.

During the last twenty years, secondary education in the towns has undergone a notable transformation. Now, as in the past, civil servants, the military, businessmen, industrialists, and landowners are desirous of ensuring for their children the advantages and privi-

leges of their social position. Their number, however, has greatly increased. Moreover, the lower classes are using secondary education as a means of social advancement. To serve this new and abundant clientele, a large number of *ginásios* (secondary schools) have been improvised without proper buildings, equipment, teachers, and adequate supervision. The increase in number of pupils and their widely varying social origins create an intellectual heterogeneity which diminishes educational effectiveness. The number of school days is decreasing and lessons are restricted to four hours daily. In the morning all the rooms are occupied; at noon the pupils have to go home to make room for the afternoon shift, which also fills the building to capacity. There is no time for individual contact between teachers and pupils; for periods of directed study; for educational guidance of any kind; for diagnosis and remedial treatment where required, and even less for pupil activity. Lessons take the form of lectures given to classes of forty-five to fifty-five pupils. Thus the teacher's function is reduced to the mere distribution of tasks and the mechanical verification of results. At the same time, and paradoxically, there is a tendency towards curricula made up of nine or ten subjects. Teachers work eight to ten hours daily, often in different and widely separated schools. For the teacher this means great strain and reduced efficiency. At the same time, there are in the large cities a few famous *ginásios* which cater for the more wealthy social groups and which have developed high standards of pupil selection and promotion.

In view of the growing number of secondary courses on the one hand and the limited number of vacancies in institutions of higher education on the other, the number of adolescents who have to interrupt their education and enter employment is increasing every year. Secondary education has to some extent been losing its function; yet, at the same time, it neither aims at nor is capable of preparing young people directly for life.

Like secondary education, higher education in nineteenth- and twentieth-century Brazil catered for a restricted public. From among the graduates in law and medicine came not only professional men but also the country's scholars, thinkers, professors, administrators, and politicians. At the same time, higher education served the function of social classification. The degree represented a social distinction which guaranteed access to the civil service and created better opportunities for marriage and a political career.

Many of the country's new institutions of university rank have been established during the last forty years. Nearly all the States of the Federation set up law faculties, and seven or eight opened schools of medicine and engineering. Recently many States have begun to establish official schools of philosophy, sciences, and letters. It is also certain that the number of candidates for higher education has increased enormously. In the older and more tradi-

tional State establishments, the increase in enrolment has not been matched by proportional increases in the number of lecture-rooms, laboratories, furniture, teaching staff, and funds.

Owing to the fact that the older State institutions for higher education have not been enlarged, and in view of the Government's failure to establish new ones, a growing number of applicants have to be turned away every year. This situation has been partly responsible for the recent increase in numbers of new private schools. With few exceptions, these lack proper buildings, equipment, and funds to pay their staff. Those who teach there can give only what little time they can spare from more remunerative occupations. There is no time for truly creative and constructive work. Examples of these new establishments open to criticism are schools offering courses in law, economy, administration and, more recently, also in philosophy, science, letters, and education. This may be due to the fact that buildings for such courses are more easily found, that they require—or are supposed to require—fewer laboratories, and to the fallacious belief that it is easier to find teachers for these subjects in view of the meagre funds available.

The change-over from this initial stage into a more positive and efficient type of organization has proved extremely difficult, not only because of the lack of financial and human resources but also because of the pressure of established habits. The truth is that both the secondary and the higher educational systems have failed to adjust to the needs of a changing situation. The old concept of secondary and higher education as a rigid system applied uniformly and meticulously all over the country was justified when it was catering for small and select sections of the society; but under present conditions it is producing extensive, surprising, and recurrent disturbances. Regardless of the wide range of aptitudes and personal characteristics displayed by the young people now entering institutions of higher education, the courses offered still follow a single and inflexible pattern, which is the same for villages, small towns and large cities, for rural and industrial environments. In addition to this rigidity, the shortage of schools is becoming increasingly serious. So far, we have not yet embarked on the organization of a public secondary school system, except for some weak attempts in certain districts. There is only a network of private schools, most of them of a commercial type, which are supervised by the Government but directly maintained by the parents.

This system functions, or rather exists, within a framework of social and economic change; the force and direction of which are not always well balanced and defined. The old conception of the school as a selective institution is gradually being replaced by a mounting demand for schooling. But the school has not yet been adapted to prepare young people for participation in a democratic and industrial society; hence certain signs of disintegration, such as

the strengthening of certain formal and mechanical aspects of education, appear. Many parents and pupils, as a result, look upon the school—through the enactment of certain ceremonies, or the dispensation of certain documents—as some sort of formality for ensuring social advancement.

Spread of Applied Technology

We have already referred to some of the material and social changes caused by the increasing use of tools. In an under-developed country with the geographic, economic, and historical characteristics of Brazil, such changes tend to be accompanied by two kinds of disequilibrium. The first between mechanical and material resources, the second between these and the human factor.

At the core of the current economic crisis lies the discrepancy which exists between the technological resources so far mobilized in the fields of power, transport, and production, and the volume of created needs and demands. The absorption of important aspects of a machine civilization sets off a chain-reaction of the following kind:

(1) Increased consumption of consumer goods—increased mechanization;
(2) Increased mechanization—increased consumption of electric power;
(3) Increased consumption of raw materials and finished products—increased volume of transport;
(4) More lorries and automobiles—increased consumption of petrol, oil, and spare parts; greater need for road construction and conservation;
(5) Increased volume of economic exchange—increased volume of rail, air, and sea transport; more need for telephone and telegraph equipment;
(6) More houses—more water reservoirs, and increased networks of water-supply, sewage disposal and lighting;
(7) Larger cultivated areas—greater demand for agricultural machinery, fertilizer, and insecticides; and so on.

If equilibrium is to be achieved, it will be necessary to carry through a number of long-term, large-scale measures such as the mobilization of internal savings, attraction of foreign capital, stepping-up of exports, and the rationalization and limitation of imports so as to make possible planned investment in accordance with a priority scheme designed to speed up the expansion of our resources of power, increase production and stimulate the circulation of wealth.

The second lack of balance results from the human conditions in the emerging society. An industrial civilization based on the free participation of the masses in the life of the nation makes for an extremely complex social pattern and a high degree of social interdependence; hence the need for perfect co-operation as a necessity for harmonious co-living and activity.

The newly emerging occupations, many of which are mechanized and collective, impose on the common man certain habits and behaviours such as punctuality, sustained effort, attention, initiative,

muscular co-ordination, and obedience to certain rules regarding the handling of raw materials, machines, and tools. They also demand some elementary knowledge, and that capacity for reading and rational thinking which enable a person to interpret the simplest phenomena and facts, to understand instructions, and to make use of publications which might help him to improve his condition or to enjoy his leisure time. On the other hand, it is essential for the common man to develop the ethical sense of everyday life. Here the acceptance and discharge of duties and obligations, and of keeping agreements and contracts, are of the utmost importance. Many of these abilities and the sense of responsibility can be transmitted only by the elementary school, whose function is thus no longer restricted to the teaching of reading and writing. It becomes a school for all, with a full time-table and a wide range of educational resources. On close examination one finds that the expansion of the elementary school is the most important single factor in the development of a technological civilization.

Vocational education is equally important, although it reaches only about 20 per cent. of that part of the population which is employed in production. Technological civilization is synonymous with the widespread use of machines and mechanical, electrical, and chemical processes, with large-scale capital investments, and with the directed action of large human groups. This requires skilled workers, craftsmen, technicians, engineers, chemists, technologists, research workers, accountants, economists, administrators, and the like.

In addition to the general education of the people, a technological civilization demands the formation of new *élites*. Under certain conditions, economic and technological factors may set off long and complex processes of social transformation, which in turn will be accompanied by new economic, technological, political and moral changes. The effects may be good or bad. There is a need for constant evaluation, analysis, research, and re-interpretation of events, by a highly qualified body of politicians, philosophers, sociologists, writers, scientists, educators, and public administrators. The function of this *élite* is to foresee future consequences of current facts or trends, to help to bring about new combinations of economic, technological, and educational factors, and to liberate social and political forces, in an attempt to redirect social developments in the light of a philosophy of life which subordinates material developments to human values.

A mass civilization can function only with the support of certain sources of inspiration and loyalty to the moral and spiritual values of human life. Such a society depends just as much on men whose moral integrity is known to all as it does on its men of learning. The indefinable forces these men irradiate inspires the common man with a faith in the perfectibility of human behaviour.

Lastly, a mass society is always dependent on leadership. This is one of the inescapable truths of present-day societies. The choice lies between good and bad leadership. The emergence of an *élite* of men of learning and of great moral figures presupposes a high level of general education. And one of the most striking effects of modern technology on education in Brazil has been a deeper and more extensive familiarity with the conditions and economic facts of our physical and social environment on the part of a growing number of public figures and ordinary citizens. But there is a growing realization that the solution of many of our problems is contingent on a strengthening of the country's economy. This has produced a growing tendency towards the mobilization of capital for investment in such things as electric-power plants, oil wells and refineries, iron and steel works, cement industries, road construction, manufacture of rails and sheet metal, of railway carriages, motor-vehicles, mechanical instruments, agricultural machinery, motors, pumps, and chemical fertilizers.

The development Brazil is at present undergoing has led to a mounting preoccupation with the training of engineers for industry and public works. There seems to be no doubt that, as regards engineering in Brazil, a tradition of general technical training has established itself as the obvious starting-point in the mechanization and industrialization of a hitherto purely agrarian society. The need for specialization becomes acute only at the end of a slow process of evolution; it is the final stage. Thus the demand for civil engineers is easily understood in the light of the country's needs during the initial phase of its progress, i.e. in view of the necessity to build railroads, ports, highways, tunnels, dams, public utilities such as water-supply, sewage disposal, public lighting, sanitation, housing, large public buildings and town planning. Nevertheless, even before the process of industrialization in Brazil had reached its peak, educational policy had been seeking to create variants of the engineering courses. Thus special courses were set up for architects, engineers of all kinds, and specialists in mining and metallurgy. However, apart from a few exceptions, the number of candidates admitted to these courses has been, and to some degree continues to be, limited. It seems certain that the intensification of competition in industry will set up a growing demand for high-grade technicians specializing in industrial techniques. The need to increase productivity and to maintain a certain price level resulting from the conquest and extension of markets makes necessary the utilization of modern and complex machinery as well as of the most refined techniques and rational methods. One should note also the remarkable progress made in Brazil as regards building techniques in ferro-concrete, urban constructions, railways, roads, and hydraulic plants. These advances, together with the rapid growth of some cities, have made possible a highly significant architectural develop-

ment. Thus the country's technical progress explains the growing attractiveness of civil-engineering courses for large numbers of young people who, ten years ago, would have preferred to take up medicine or law. In this context, mention must also be made of the technical schools of university rank set up by the armed forces for the training of military engineers. These schools are housed in special buildings, with excellent laboratories and a teaching staff composed of national and foreign professors. Many of the graduates of these institutions have undergone training periods in foreign universities and industrial establishments. Some are now working in Brazilian State industry.

Another promising step has been the foundation of institutes of industrial technology in the large industrial centres. As regards agriculture, the tradition of technological and scientific research initiated in Campinas has been extended by the foundation of the São Paulo *Instituto Biológico,* by various large agricultural research centres set up by the Federal Government in the north, centre, and south, and by the big rural university near Rio de Janeiro. And there is a growing number of Brazilian students specializing in technical subjects in universities abroad. Recently a special commission was established by the Federal Government to investigate the opportunities for professional education in Brazil, the degree of efficiency of such education, the numbers of existing graduates, the types of occupations requiring professionally trained personnel, and so on. A programme is now under way which includes the employment of foreign lecturers in certain fields of higher education, foreign study, and training periods for Brazilian teachers, and special training for assistants and instructors. Moreover, a " National Research Council " and a " National Commission for Technical Assistance " have been set up. The programme of the former includes the provision of training, both at home and abroad, for research personnel in pure and applied science; the latter is entirely devoted to the implementation of an amplified U.N. programme of technical assistance, involving the engagement of the services of foreign experts and specialists in Brazil and the award of scholarships for study abroad to Brazilian technicians.

In addition to these bodies, there are a number of organizations such as the DASP (Civil Service Administrative Department), SENAI (National Service of Industrial Apprenticeship), the " Getúlio Vargas " Foundation, the *Instituto Brasil-Estados Unidos* (Institute for Cultural Relations with the U.S.A.), *Sociedade Brasileira de Cultura Inglesa* (Anglo-Brazilian Cultural Society), the *Alliance Française* among others, all of which are offering opportunities for foreign study to Brazilian technicians.

Another reflection of current ideas and trends is the creation by law of intermediate technical courses for the training of specialists in industry and transport whose functions are subordinate to, but

linked with, the engineer's. The conclusions reached after ten years' experience with these courses are similar to those applying to industrial engineers: it is only after reaching the competitive phase of industrialization that a country is in a position to use them to any appreciable extent. In the early stages of industrial expansion, when the dominant attitude is one of pioneering, the empirical approach often predominates over rational methods of production, and the number of technicians industry can employ is relatively limited. What is needed, in our opinion, is a limited number of intermediate technical courses of an industrial type, well equipped with workshops and laboratories, catering for a selected student population in the large manufacturing centres. In those States where industrial development is still in its incipient stage, where the public authorities are beginning to take over many of the essential public utilities, and where there is a shortage of engineers, it might be profitable to introduce courses of the American "Junior Engineer" or of the French *Arts et Métiers* type into the existing federal technical schools.

One of the most significant results of the country's industrial growth has been the creation of a new organization for the training of skilled labour for industry and transport (SENAI), maintained and administered by the National Federation of Industry. In view of the Brazilian tradition of on-the-job-training of skilled workers and the need to integrate this training with systematic schooling, a programme of factory work alternating with school attendance seemed a tempting solution. SENAI is an entirely autonomous and highly decentralized organization. Local administration in each industrial region rests with a sectional council of industrialists and Government representatives. An attempt has been made to ensure a maximum of flexibility and freedom from bureaucratic and centralizing procedures, so that schools and courses might be adapted effectively to the extremely variable and constantly changing needs of industry. A fundamental aspect of the organization of SENAI is its co-ordination with the factory. Courses and schools may be modified, and new ones created, in accordance with the developments in manufacturing techniques inherent in the nature of industrial progress. The students' status under this new system of industrial training is that of factory apprentices, i.e. of minors employed in industry and who, in exchange for their services, receive wages as well as an apprenticeship training. Two or three days per week are spent at the SENAI school, and during the remaining part of the week they work in a factory. Wages are paid not only for the time spent in the factory but also for that spent at school. Thus these young people are assured of a steady income. Most of them—in view of their low economic status—depend on this.

SENAI has been very well received in educational circles. Its

autonomous character gave it a great advantage which showed itself in the building of large schools and the acquisition of excellent equipment in a relatively short space of time, and which greatly added to its prestige.

In evaluating some of the characteristics of what we have called the 'phase of transition', we have pointed out some of the effects of progressive industrialization on our educational system at the primary, secondary, and higher levels. What is the outlook for further developments of this educational system in the future? We believe that, generally speaking, its quantitative expansion will be closely linked with the growth of the country's circulating wealth. However, the numerical aspects are not the only ones to be considered. In a country with a population of about 55 million, with a rate of increase of over a million a year, with an enormous wealth of natural resources to be exploited, and with the mechanization of this exploitation well under way, the forces at work are bound to lead to the development of a new philosophy of education.

The educational evolution of some European nations and of the United States was to a large extent influenced by factors such as the craft guilds at the end of the Middle Ages; the rise of humanism and of artistic perfection during the Renaissance; the need for widespread literacy to make possible the interpretation of the Bible; the clash of ideas caused by the French Revolution and its effects on educational thought and practice; the parliamentary system of representation, and the subordination of school systems to local communities rather than to central governments. The Brazilian school has been affected by these factors only to a limited degree. However, the country has made great strides during the present century. It stands to reason that the progressive utilization of these technical resources will be the main factor determining our educational evolution in the near future. What is needed, in our opinion, are certain basic changes in the following direction:

(*a*) There should be a bold policy of educational investments to serve the masses who are beginning to make use of the school.

(*b*) The wide range of conditions and capacities within the heterogeneous mass of the new pupil population makes necessary an increasing diversification of courses offered.

(*c*) The increasing need for continuity of planning and administrative measures, for the prompt solution of problems, and for easy adaptability to local conditions, requires new forms of autonomous administration.

(*d*) The new way of life demands an education based not only on the acquisition of knowledge but equally on action, work, and co-operation.

(*e*) In view of this new way of life, and of the growing participation of the common man in public affairs, education should aim at the development of the ethical and civic values in human relations.

JOAQUIM FARIA GÓES FILHO.

CHAPTER FOUR

THE AMERICAN UNIVERSITY OF BEIRUT

THE limitation of this discussion to the American University of Beirut is not intended to indicate that this institution is the only one in the Middle East in which special programmes are offered designed to produce leaders in various fields. It is chiefly because at the American University of Beirut one finds a singular collection of programmes, ranging from the vocational to the professional, all of which have demonstrated their effectiveness in the production of leaders for the various Middle Eastern countries.

The American University of Beirut was established in 1866 to provide liberal arts and medical training primarily for students " speaking the Arabic language ". As years passed and the institution increased in size, the programme became more diversified. New departments were added to the School of Arts and Sciences, the School of Medicine developed within itself Schools of Pharmacy and Nursing, and within the past three years new Schools of Engineering and of Agriculture have been created. At the present time the university has a student body of 3,200 students representing fifty different nationalities and twenty major religious groups. The geographical coverage of its students encompasses the entire Middle East.

The university was established initially in order to provide an opportunity for higher education in an area where none had previously existed. With the growth of national universities the American University of Beirut has sought not only to produce graduates of high quality and technical competence, but to provide stimulation to the constant improvements of national teaching programmes, and to the development of research within the area, both as an end in itself and as a medium for the training of additional research workers. Research in this part of the world is not looked upon as a natural part of the teaching function, yet until it is recognized as such, higher education must tend towards sterile formality, lacking the power to inspire respect and self-improvement.

Within the School of Arts and Sciences three major channels of interest are offered: one is designed to prepare students for entrance

into one or another of the professional schools; the second, leading to a Bachelor of Business Administration degree, is intended to prepare men for leadership in business life; and the third major emphasis, leading to the B.A. degree, is upon the liberal arts and sciences programme, either as a terminal course or as a preparation for graduate study. In this channel great emphasis is put upon teacher training, for the great bottle-neck in educational development in the Middle East is the shortage of qualified teachers, which afflicts every country without exception.

The Medical Division

The Medical Division admits students who have completed junior year or its equivalent in the university and provides for them a five-year programme prior to hospital internship. Increasing emphasis has been placed recently on the development of public health and preventive medicine as an integrating factor throughout the clinical years. The university believes that it can train no man in the medical field who can properly be called a leader who does not have an awareness of the bearing which his particular speciality has on the general struggle to prevent disease. This is perhaps especially necessary in the Middle East, but it is probably also true throughout the world.

The Engineering School

The Engineering School was established in October 1951 as a realization of the intention of the university to move still farther forward in terms of active participation and potential leadership in the social and economic development of the Middle East. Expansion of agricultural production, the better utilization of natural resources, improvement of public health, the development of transportation and communication facilities, as well as industrial enterprises of all kinds, require that engineering ability be available in quantity and quality.

In order to produce men qualified to meet the needs of the Middle Eastern area, a unique programme in engineering training has been established. The School of Engineering includes three major segments:

(1) The School of Professional Engineering, which provides professional training leading to degrees in civil, mechanical, electrical, and architectural engineering.

(2) The engineering experimental and service laboratories, which are designed not only to provide testing and research facilities for the area, but also to serve as a training facility for a wide range of laboratory procedures and techniques, as well as a base for special courses in industrial development.

(3) The engineering shops and plant, which are sufficiently

extensive to compensate adequately for the dearth of mechanical experience commonly found in the Middle East. The shops include sufficient industrial plant to provide the necessary operating experience for the engineering students, as well as facilities for training industrial-education teachers, vocational and technical teachers, foremen and trained journeymen.

The Engineering School is organized as an industrial concern, with senior students filling administrative and supervisory positions typical of an industrial organization, of which the Faculty serves as the Board of Directors. Every effort is made to duplicate working and producing conditions in an actual plant, in order that there may not at graduation exist the wide gap between engineering study and engineering practice which has become a serious obstacle elsewhere to the assimilation of engineering graduates into industrial operations.

It is still too early to determine whether the intent of the Engineering School is being fully realized in the quality of its graduates, for none has yet been produced from the full four-year programme. However, all indications lead one to sound optimism.

The School of Agriculture

The School of Agriculture, now in its second year, is, like the School of Engineering, a reflection of the university's awareness of the needs of the area. Primarily an agricultural economy, the Middle East has an almost limitless need for leadership in agricultural management. The Agricultural School at the A.U.B. is, to my knowledge, the only professional-level agriculture school in the entire Middle East, if one excepts Egypt and Turkey. As such it has aroused the interest of most of the governments in the Middle East, many of whom are already sending bursary students to it. The members of the Faculty have made a special effort to familiarize themselves with agricultural problems in the area. When the four-year programme is in full operation, it will be geared to produce the type of responsible persons that are needed to develop the agricultural potentialities of the area.

The four-year programme in the School of Agriculture involves three years of theoretical and laboratory work in the agriculture buildings on the main university campus, but the third year of the four-year sequence is spent entirely on the university experimental and training farm in the Bekaa Valley, nearly fifty miles from Beirut. The establishment of the farm at such a distance is intended to render coming into the city difficult, and it will be necessary for the students to live on the farm and to learn the essentials of farm work by close personal experience.

Admission to the Engineering School and the Agriculture School takes place at the end of the freshman year, but throughout the first years of the professional programme, close integration is main-

tained with the School of Arts and Sciences in order to avoid too high a degree of specialization with an absence of any cultural understanding. The university believes that although specialized technical knowledge is desirable and essential within the Middle East, real leadership will be provided only by men who have a cultural awareness broader than that of their particular technical field.

Special Programmes

In addition to the regular courses which have been outlined, the university has undertaken special programmes of technical training in collaboration with the Foreign Operations Administration (Point Four) of the U.S. government. For the past two years special one-year training programmes have been offered in the fields of public health, public administration, economics, engineering, and agriculture. Since 1952–3 economics has been replaced by a programme in education, considered more essential by the various governments.

The public health programme contains two segments on the pre-professional level: training for sanitarians and training for laboratory technicians. On the university level, work was offered in medical technology and public health nursing. The former course was given up after the first two years because of a shortage of candidates qualified to complete the work in one year, not because the various governments did not need personnel able to establish and direct medical laboratories.

In education also, pre-professional training has been offered through the medium of summer institutes for elementary school teachers, one for those from rural areas, one for urban teachers. These institutes have been conducted in the Arabic language, and have had astonishing results in creating a new appreciation of the value of the teacher's function as well as an awareness of modern techniques on the part of the teachers attending. Every student in the institutes has been a regularly employed teacher, appointed to the institute scholarship by his or her government. For eighty openings there were in one year 750 applicants.

The work in public administration sought to provide a graduate-level programme, primarily for men who were already employees of the various Middle Eastern governments. This intention could not be fulfilled in more than a few cases, either because of a language handicap (all regular instruction in the university is carried on in English) or because government employees who might be qualified for advanced study could not be released from their jobs. It was necessary, therefore, to expand the public administration offerings to the undergraduate level, where they have speedily made a place for themselves as an area in which large numbers of students are interested regardless of the availability of F.O.A. fellowships. Naturally, however, the programme is ill adapted for one-year

scholars, and several of the best-qualified F.O.A. fellows have been permitted to return for a second year.

The principle upon which these special programmes are operated was that candidates for fellowships would be nominated by their own governments, although their admissibility would be judged by the university itself. During the first two years of the programme it was possible to secure without difficulty the total number of fellows allocated by the contract. Due to a change of procedure involved in a two-year renewal of the original contract, the student-recruiting techniques were not so successful this year. But in spite of that fact, there are now 160 fellows studying in the various programmes, representing nine different countries in the Middle East. These are Egypt, Eritrea, Ethiopia, Iran, Iraq, Jordan, Lebanon, Liberia, and Libya. In past years Syria, Palestine (UNRWA), and Aden have been represented.

Graduate Study

Increasingly during the past few years, the university has felt the necessity of providing opportunities for graduate study and for research, especially on the problems of the Middle East. Beginning in 1949, a research programme in modern Arabic studies was established by a grant from the Humanities Division of the Rockefeller Foundation. Three years later it became possible to establish an Economic Research Institute with a grant from the Ford Foundation. A research programme in education has just become a reality, thanks to a grant from the Rockefeller Brothers Fund.

The attitude of the university towards research is based on a conviction that it is not only a necessary university function in itself, but that functioning research activities have attributes essential for educational processes designed to provide leadership. The Faculty members themselves are stimulated to better teaching effort if their thinking is enriched by the product of their research work. The existence of programmes of research provides stimulation to undergraduate students who come to recognize that the achievement of a degree is not necessarily the ultimate goal of education. Both undergraduate- and graduate-level students are given experience in research through collaboration with their teachers, and after graduation they may establish themselves as centres of research effort over a wide area. Furthermore, they have an opportunity to come into closer and less formal contact with their teachers than is possible in the classroom alone, and are thus in a position to absorb more of the professors' influence than might otherwise be the case.

The Spheres of Influence of the University

Much of what has been said above refers to theory. How has the influence of the university shown itself in practice? So far as the provision of leadership in the political field is concerned, the record

is fairly astonishing. For example, some 10 per cent. of the Lebanese Chamber of Deputies is composed of A.U.B. alumni, in addition to the Speaker and the Deputy Speaker of the Chamber. In Syria, 15 per cent. of the Chamber of Deputies attended A.U.B. In Iraq, the Prime Minister and five additional members of the Cabinet are alumni or former students. In Jordan, the Prime Minister and five other members of the Cabinet are alumni or former students. Considerable numbers of graduates represent their governments abroad in their diplomatic services. It is a well-established fact that there are more alumni of the A.U.B. serving in the United Nations, in one capacity or another, than graduates of any other single institution in the world.

But political leadership is not the only area in which the graduates of this institution are outstanding. The university has been largely responsible for the establishment of professional standards of nursing in the Middle East. Its physicians, pharmacists, dentists, journalists, engineers, educators, and scholars are outstanding. In most of the Arab countries, and in some which are not Arabic-speaking, the impact of men, and women as well, who have been educated at A.U.B. is making itself felt. No mere estimate of numbers (approximately 12,000) would fairly represent the facts, for the influence is far more of a qualitative nature than it is quantitative. There can be no doubt that the university has, during its eighty-six years of existence, succeeded in the aim which it still pursues with undiminished vigour of producing leaders for all the countries from which its students come.

As a final word of indispensable explanation it should be said that whatever success the A.U.B. has achieved has resulted more from the consecration of its Faculty to the task of producing leadership than it has from the sheer extent of the technical training which has been offered. The influence of devoted men, even when the physical facilities were extremely limited, has produced an effect upon the student's character which has remained with him throughout his subsequent life. This unquestionable fact leads me to the considered opinion that training for leadership must be constituted of three essential components, without which it will not be effective. These are:

(1) Students with intellectual capacity sufficient to profit by the opportunities presented to them. In the Arab East, the innate intellectual ability averages at least as high as that in the United States, and mechanical aptitude is surprisingly strong for a non-mechanical culture.

(2) A competent and devoted teaching staff intent on creating from their individual students individual leaders whose personal traits they know intimately. A serious problem at the A.U.B. is created by the pressure of students to enrol. It is hoped to maintain an average ratio of better than one teacher to every ten

students, but the enrolment must soon be limited if this is to be maintained.

(3) Adequate provision of teaching materials and a well-adapted curriculum. The A.U.B. has been fortunate in being able to secure items 1 and 2, and it is constantly working to acquire a satisfactory status on item 3. Such a goal can only be approached, never achieved, for a competent Faculty is a perpetually dissatisfied Faculty.

S. B. L. PENROSE.

[One of the most powerful influences in the transformation of the Middle East in the past century has been the impact of Western thought through the agency of mission and philanthropically supported European and American schools. Among the most influential of these foreign educational endeavours has been the Near East College Association which supervises a group of American universities in Turkey and the Arab States. One of these member institutions is the American University of Beirut, whose President, Dr. Stephen B. Penrose, author of *That They May Have Life: The Story of the American University of Beirut, 1866–1941*, prepared this article.—THE EDITORS.]

CHAPTER FIVE

ADULT EDUCATION AT THE JEANES SCHOOL FOR COMMUNITY DEVELOPMENT IN KENYA

THE function of the Jeanes School is to support community development in Kenya by means of adult education. The school was handed over to the Commissioner for Community Development for this purpose in 1950, inheriting then a tradition of a quarter of a century of adult education and considerable groundwork in the study of civics and methods of adult education.

We direct our attention to adults for the following reasons:

(i) The African communities are changing and developing so fast that the country cannot afford to wait until the children now in school grow up, nor even until those who have left school achieve more responsibility in their communities.

(ii) Practical community development is in the hands of the responsible citizens, the tenants or owners of the farms, the housewives, the district councillors, and so on.

There is a sense of urgency about this task; if the present adult generation do not solve the problems of our day, the soil, the hygiene, the living together, and the mental barriers to new conceptions, there may be only a derelict country and society to hand over to the rising generation.

Residential Courses for Community Development

Many methods of mass-education for community development have been tried in Africa since the war. It was Kenya's particular contribution in this field to offer residential courses to the adult citizen, the farmer, the shopkeeper, the housewife, as distinct from the schools set up to train staff for extra-mural education in the field. Much fine work has been done by demonstration teams, and in educational mobile cinemas, and by departmental instructors, by teachers, missionaries, doctors, settlers, and so on, and the wives of all these; and we support and take part in all this work. But we are satisfied that the value of the residential courses is proved for our purposes. The isolation of man and wife from the cares of farm or shop or home make possible the necessary concentration on the acquisition of knowledge and skills that are otherwise too much interfered with to prosper. We value highly, too, the stimulus of

interchange of ideas and experiences between the members of our courses, drawn as they are from all parts of Kenya, and some from other territories, Uganda, Tanganyika, and Zanzibar.

Methods of Instruction at Jeanes School

For our advanced courses the usual methods of instruction by lecture, discussion, and in practicals, with supporting visual aids, are employed. But for our less well-educated groups we employ more visual methods, and make great use of visual experience by conducting parties to see improved methods in use in neighbouring farms and homes.

In view of the dearth of printed matter, we also issue cyclostyled summaries of our course work which the students take home with them for further study, which they often do with groups of their friends or family.

The Jeanes School Students

To attempt a summary, students are a cross-section of the adult community of Kenya. The majority are African men and women, from the rural districts, many of them playing an active part in community life as councillors, church elders, and so on, having little previous education. They attend the development (see below) and citizenship courses, most of which are for one term.

Fewer in numbers are the well-educated adults, mostly African men, who attend the short advanced citizenship courses, and a few of the same type, but still in training or in advanced refresher courses in their late teens and early twenties, follow the hygiene training courses. We have European students, mainly established civil servants and missionaries, in the language courses; and a proportion of Europeans and Indians and Kenya Arabs at our conferences and in our physical education and music courses.

It is noteworthy that we have no less appreciation expressed by students here for the courses in which the element of self-interest is negligible, e.g. the citizenship courses, than for such obviously advantageous courses as the farmers', shopkeepers', or homecrafts courses. Although these courses are short, usually one term only, appreciation is expressed in such ways as "We did not know the truth before", referring to such controversial issues as land boundaries, wages, prices, the work of the government departments.

Staff Training

For seven years since the war we have conducted a training course for junior staff. All have been young Africans who are employed by African district councils on informal adult-education work in managing village halls, and making them centres of adult-education work. They also work outside the halls in support of special de-

velopment schemes, organizing and helping sports clubs, women's clubs, farmers' clubs, scouting, or other youth and adult organizations.

Extra-mural Work

It is almost impossible to draw the line and say where adult education for community development begins and ends. It has been described as an intensification of the normal functions of the administration and other departments of government, of the missions, and of every citizen. Certainly the inspiration and instruction needed for community development emanates not only from the established staff of the Community Development Organization both residential and extra-mural. We play our part and it is complemented by the interest and hard work of missions, officials, and civilians all over the country.

Jeanes School sends out staff to assist with or to conduct short courses of a week-end or a week, in rural and urban centres, having special reference to development work and the community life of their particular district, and being attended by mixed groups of junior government staff, teachers, missions members, and private citizens. Further, all Jeanes School students are encouraged to help with social and educational clubs such as the farmers' clubs and the women's homecrafts clubs. It is a condition of admission that the women on completion of their homecraft course assist with their local women's clubs.

In all these ways we encourage the spread of knowledge and civic wisdom and co-operation in support of community development beyond the school, and try to provide nuclei round which the progressive people may gather.

It is not possible for me to comment on all the Jeanes School courses, as space is limited, but some explanation and discussion of our main subjects may be of value.

Our main educational work may be summarized under the following heads: rural development, homecrafts, cultural progress, citizenship.

Rural Development

All instruction for practical improvement in the standard of life is obviously important, but we regard the improvement of agriculture and animal husbandry as fundamental, as being necessary before much further progress can be made in the provision of services and home improvement, simply because it is the country's main and almost only source of wealth.

Practically the whole African population are peasant farmers, employing very primitive methods. The principal African farming areas are potentially productive, and considerable increases in production can be obtained by the adoption of simple practical im-

provements. Yields of the principal crops, such as maize, can be doubled or trebled by the use of manure. Hence soil conservation, the making and use of manure (which are entirely unknown among most tribes) are fundamental processes taught in our farmers' courses. Simple improvements in feeding and breeding of livestock can bring equally great or greater increases in output of milk and meat. So in our instruction such things as livestock enclosure, preparation of silage or other feeds, and use of good bulls are very important. These improvements alone can raise the standard of living of the rural people from mere subsistence to the production of a cash surplus, as well as bring great improvements in health, particularly, for example, among the children, who are desperately short of milk in their weaning days. In addition we show methods of establishing and cultivating crops such as coffee, fruits, and market-garden crops, which bring in excellent cash returns.

The Jeanes School farm, by simple methods of good husbandry, produces three times the yield of crops and animal produce that our Kikuyu neighbours obtain on the other side of our boundary fence, and this does more to convince the African farmers than any of our classroom instruction.

There is great demand for our farmers' courses. The students are selected by the district administrative officers and the agriculture officers. They choose those who show signs of having attempted to improve their methods themselves, and whose methods are likely to be followed by their neighbours. The courses are open to women and they have taken up a few places on several courses recently.

Other courses in rural development, such as the shopkeepers', hygiene, school, and so on, are listed below with brief notes on each. Our students come from all parts of the country, a proportion from each province, except for the farmers' course, which is filled up by men and women from one geographical region at a time.

Homecrafts

It is no easy task to get the women to break out of the well-established routine of the peasant household, severely limited by extreme poverty. When practically the whole product of the farm or cash income is necessarily spent on subsistence it leaves next to nothing for the improvements we try to establish, however utilitarian a standard we set. Unless the basic standard of living is raised, very little is left for the baby's cot, the clean sheets, the clean utensils, the weaning foods, the prophylactics for malaria, or even the bus fare to take a sick child to a dispensary for free medicine. It provides nothing for the scissors, needle and thread, nor for the lengths of material out of which might be made simple children's clothes, shirts and trousers for the father, frocks and underclothes for the mother and older girls.

Nor does it provide anything for soap for the laundry, much less

for personal use; nor for a zinc bath that is the first improvement on washing on a muddy rock at the stream or the dirty well or water-hole entirely lacking masonry; nor for the simple utensils that are required even to make the first steps towards better cookery.

We teach all these things, and on the whole we have access to those whose husbands have contrived to find a little surplus beyond the basic requirements of living. We hope, too, that such women will be objects of emulation to their neighbours and a stimulus to ambition. And we make it a condition of acceptance on this course that women will become members of the women's club (rather like women's institutes in Great Britain) on their return home.

The main subjects of the course, which lasts for one year, are hygiene and child welfare, needlework, laundry, cookery, and gardening. There are numerous and active outside activities such as games, literacy classes, and so on.

Cultural Progress

African talent in music, drama, athletics, and games is appreciated the world over. In what may be grouped together as cultural studies our aim is to build on to native talent and achievement such improvements in technique as are assimilable and suitable. For example, in our dramatic work we produce plays written in Swahili about life as it is lived in Kenya to-day. In music we collect and use and in some cases modify, with technical improvements, the instrumental and vocal music of the people. Kenya athletes have already won a name for themselves in competition outside the country, and will take part in the Empire Games in Canada in 1954. Jeanes School is the headquarters of the Colony Sports Officer.

The strong religious element in the African character now seeks expression in the Christian way of life, and we try to guide and foster this in the school chapel and in our classes for religious study.

Citizenship

The syllabus of our citizenship course is intended to give a background of knowledge, a minimum equipment for the average citizen, in the affairs of his own country.

The syllabus is expanding continually, and one of our problems is to keep it within the bounds of our short courses lasting only a few weeks. At present it consists of the following subjects: the history of Kenya; the economy of Kenya; the government of Kenya; some special social studies, e.g. family life, land tenure, pastoral customs; a general review of Kenya agriculture; hygiene; physical culture; music and drama; religious studies.

The course is aimed particularly at an understanding of the problems and opportunities of the country.

We start in the history section with a review of the ways of life of the people in the nineteenth century before the arrival of the

Indians and Europeans, in the days of slave-raiding, of epidemic disease, of tribal warfare, of witchcraft and superstition.

The course continues with a review of the twentieth century from the establishment of British rule and of settlement, of health and medical services, the establishment of a cash economy, of education, of the Christian churches, and of internal law and order. It leads on to the present day and reviews the growth of the problem of land and dense population, of the ideas of African nationalism, of the pagan and racialist movements, and the gradual evolution of the multi-racial idea.

The syllabus then turns to more detailed study of the Kenya economy, showing how it stands on agriculture, and the contributions made to the national income by this and other occupations. And it pays special attention to detailed studies of the rural economy as it is and to the possibilities of improved agriculture.

In government the syllabus traces the growth of representative forms of local and central government during the period of British rule, and studies in detail the functions of local government institutions and the activities and responsibilities of the central government.

We do not regard it as our function to instruct only. In all our work in the citizenship studies it is our method to open up the subject, provide a factual basis as far as necessary, and discuss the situations in the country frankly and freely.

Urban Citizenship

We approach the urban citizen mainly in our citizenship courses. Members of the advanced citizenship courses are usually civil servants, municipal employees, teachers, welfare officers, and so forth. Other courses which are suitable for and do accept urban people are the women's homecrafts school, the shopkeepers', and some of the special short courses such as the librarians' and the music course.

JOHN L. PORTER.

CHAPTER SIX

UNIVERSITY FACULTY FOR PEOPLES OF THE NORTH

AMONG the numerous nationalities inhabiting the Soviet Union are the peoples of the North; in old, tsarist Russia they were economically and culturally the most backward group of the population.

Until the Great October Socialist Revolution these peoples were almost entirely illiterate and had no alphabet of their own. Immediately after the Soviet government was established, measures were taken for their political, economic, and cultural regeneration.

One of the most important measures for raising the cultural level of the peoples of the North was the training of national cadres of teachers. Qualified teachers of Northern nationality for the secondary schools, teaching schools, colleges, and technical schools are being trained, among others, by the Faculty for Peoples of the North at the Herzen State Teachers' Training Institute in Leningrad.

Representatives of all the indigenous peoples of the North are studying at the faculty—the Nenets, Saami, Khanty, Mansi, Selkup, Evenk, Even, Nanai, Ulchi, Chukchi, Koryak, Itelmen, Eskimo, Aleut, Nivkhi, as well as the Yakut, Dolgan, Komi, and others.

Students of the faculty choose one of the following specialities: their own language and the Russian language and literature, history, geography, and mathematics.

They take a four-year course of training according to the curriculum of the Teachers' Training Institute, and, in addition, every student is obliged to study his own language and the history, ethnography, and folk-lore of his people.

The students of the faculty are given every opportunity to devote themselves fully to the study of their chosen subject. Their upkeep throughout the period of their studies is paid for by the State. The state not only pays for their education, but for board and lodging, clothing, and railway fares to Leningrad and back to the North after graduation.

The students attend lectures by noted specialists in the Russian language and literature, history, geography, mathematics, teaching, etc.

The chief specialists on languages of the peoples of the North are divided at the faculty into three departments: the Ugro-Samoyedic, Tungusic-Manchurian, and Paleo-Asiatic languages. The teachers and professors draw up special courses for language study and text-

books. The scientific problems studied by the departmental staffs (problems of language and dialect, grammatical system, phonetics, vocabulary) are of great practical importance for the development of the literary languages of the peoples of the North. The teachers, in co-operation with the students, are also doing important work on the question of creating school literature and systematic aids for the Northern national schools.

The students of the faculty take a most active part in the production of educational literature and fiction in their own languages. Many of them are translators and authors.

In addition to their regular studies, the undergraduates attend various circles where they study music, singing, drawing, and gymnastics, thus acquiring a second teaching speciality.

Various forms of amateur art, such as national songs, dances, theatricals, and music, are extremely popular among the students.

Specimens of folk art are collected, studied, and creatively re-worked under the guidance of specialists.

After acquiring a speciality, the graduates go back to their national districts and areas, where they work as school teachers and leading cultural and educational workers—head masters, managers of district education departments, newspaper editors, and so on.

Some of the graduates of the faculty take up scientific work. N. Tereshkin, a Khanty, for instance, is a member of the research staff of the U.S.S.R. Academy of Sciences' Linguistics Institute, and a teacher of Khanty at the faculty. M. Vakhrusheva, a Mansi, teaches the Mansi language at the faculty and works as an editor in the Educational Publishing House. S. Onenko, a Nanai, is working on his thesis for the degree of Master of Philological Sciences.

Every year the schools of the Soviet Arctic receive new reinforcements of qualified educational workers.

A. Shcherbakov.

CHAPTER SEVEN

EXCHANGE OF PERSONS

ONE of the most important instruments for the education and training of personnel in under-developed areas is the planned exchange of persons. In the following three articles, the British Colonial Office, UNESCO, and the American Institute of International Education discuss their educational exchange policies. THE EDITORS.

THE COLONIAL SCHOLARS PROGRAMME

THE rapidly increased *tempo* of economic, social, and political progress in the colonial territories has led inevitably to a demand for more and more trained personnel to fill the necessary posts in the public services and in the fields of professional and commercial enterprise. The higher posts in the public service, the majority of which were formerly filled by expatriate staff, are now open to locally-born candidates who have proved their worth. Moreover, the extension of secondary education is reflected in a desire for higher education, which cannot as yet be fully satisfied locally.

The need to meet this demand for higher education has been foreseen and plans have been made to implement it in all the main areas. There are in the colonial territories three universities (in Malta, Hong Kong, and Malaya) and four university colleges in special relationship with the University of London (in the West Indies, in the Gold Coast, at Ibadan in Nigeria, and at Makerere in East Africa). The old-established college of Fourah Bay in Sierra Leone also offers certain degree courses in affiliation with the University of Durham. There has, moreover, been a rapid expansion of technological colleges and departmental and trade training schools. As yet, however, this provision meets only a small part of the need. Moreover, there are certain technical and professional courses, such as engineering and law, for which no facilities exist overseas.

A certain number of students, from the West Indies, West Africa, and Hong Kong, have looked to universities in Canada and the United States to meet their needs, and the territories in South-East Asia and the Pacific maintain close contact with universities and colleges in Australia and New Zealand. But practically the full weight of the demand has had to be met by the universities and

other institutions for higher education in the United Kingdom, which have responded nobly to the challenge.

The number of colonial students undertaking full-time academic and practical courses of study in the United Kingdom has risen steadily each year since 1946, and now stands at 7,985 on January 1st, 1954. This compares with about three hundred in 1939. Of this present total, one-quarter are in receipt of scholarships or bursaries from the funds provided under the Colonial Development and Welfare Acts in the United Kingdom, from Colonial Governments, and from other authorities in the colonial territories. The remaining three-quarters are financing themselves from their own resources.

The main areas from which these students come are:

West Africa	3,300
West Indies .	1,770
Malaya and Hong Kong	1,250
East and Central Africa	950
Mediterranean	415

The students follow a diversity of courses in universities, technical colleges, and training institutions of all kinds throughout the British Isles. About half of them, including the large number of students who are reading for the Bar, are centred in London.

The main courses of study being followed in the present academic session, 1953–4, are:

Course	*Scholars*	*Private Students*
Nursing . .	80	1,360
Medicine and dentistry	280	770
Law .	90	1,055
Engineering . .	315	610
Education and teacher training	225	205
Arts degrees	180	295
Science degrees	110	220
Economics and commerce	95	205
Architecture	40	100
Agriculture	70	40
Accountancy	40	60
Domestic science	30	60
Dressmaking	5	70
Pharmacy	20	50
Social science .	30	25
Public administration	30	20
Surveying	40	5
Music	5	40

There are also upwards of five hundred students, including fifty-six scholars, who are taking preliminary courses to qualify themselves for eventual admission to a university or college.

The numbers show no sign of falling off, and it is fully expected that the totals in almost every branch will be even higher next year.

At the instance of the universities, who found it difficult to make a

comparative assessment of students whom they were unable to interview and of whose background they were ignorant, a system of 'recommendation' has been evolved. Representative Student Advisory Committees in the colonial territories interview and advise all candidates who wish to undertake studies abroad and inform the Director of Colonial Scholars in the Colonial Office, through their governments, whether a candidate is, in their opinion, suitable both academically and on grounds of character, and whether his finances appear to be adequate for the purpose. The Director of Colonial Scholars and his staff then select a suitable institution of higher education for the course proposed, following the candidate's own wishes so far as possible, and recommend him for consideration to a university or college, in whose hands, of course, lies the final decision. This method of recommendation has been found to save a good many heart-burnings and disappointments on both sides, and is now an almost universally accepted feature of the system of admissions. There is no rigid quota for colonial students (except in so far as most universities have a recognized over-all limit on the admission of overseas students), and colonial candidates are accepted or rejected on their merits and subject to the capacity of the various faculties.

While these arrangements for recommendation and placing apply to all colonial students, the scholars are naturally the primary concern of the Director of Colonial Scholars, who is responsible to their governments for the payment of their allowances, for the general supervision of their studies, and for their eventual return to their territories. Plans are, however, now being made for the devolution of some of these responsibilities to student units under the direction of the Commissioners in the United Kingdom for some of the more politically advanced territories. One unit has just started work, and others will be functioning during the course of the year.

Very careful and detailed arrangements are made for the social well-being of the students from the moment they set foot in the United Kingdom. Liaison officers appointed by the governments of the various territories or groups of territories assist the Director of Colonial Scholars in maintaining personal contact with the students, keeping them informed of happenings at home and of possible openings for employment and informing their governments of their progress. Some of the governments have helped to set up social centres and residential clubs in London, where students can meet each other and their friends.

The British Council has been charged with an important responsibility in the reception of all students on arrival and their subsequent accommodation during their stay. Some live in the British Council residences, in university halls of residence, or other hostels, but the majority are accommodated in lodgings and every effort is made to suit them to the homes where they are recommended. All the British Council's centres throughout Great Britain are at the disposal of

colonial students for social and recreational activities. The Council arranges introduction courses for new arrivals, and also vacation courses, lasting from a week-end to a fortnight, to enable groups of students to study special aspects of British life. Students are assisted with the cost of these courses and with the purchase of sports equipment from an amenities fund, from which grants are also made to the many voluntary societies who devote much time and effort to their welfare. A standing committee of these societies in London ensures co-ordination of their activities and has sponsored local Commonwealth students' committees in two of the London boroughs. This wealth of social endeavour has done much to ease the problem of settling down in a new community.

B. G. STONE.

UNESCO'S EXCHANGE OF PERSONS PROGRAMME

UNESCO's Exchange of Persons Programme is generally directed towards one of the purposes and functions of the organization described in its constitution: the encouragement of co-operation among nations in all branches of intellectual activity, including the international exchange of persons in fields of education, science, and culture.

For this purpose various methods are used, including the collection and dissemination of information on all aspects of exchange-of-persons problems, the development of special studies, the issue of publications, and the direct award of fellowships, scholarships, and travel grants. The Exchange of Persons Programme specializes, therefore, in all problems concerning the actual movement of persons from one country to another as a means of spreading knowledge, supporting specific projects, developing fields of study and promoting international understanding.

The actual work of the programme is carried out through two distinct but complementary methods of approach. One of these is found in the direct award of fellowships, scholarships, and educational travel grants related to special projects. There are, however, budgetary and other limitations upon the extent to which UNESCO can pursue its aims in this way. All such awards should therefore be seen either as a service in support of particular UNESCO projects and fields of interest, or as experiments in certain types of educational exchange.

The unique nature of the Exchange of Persons Programme lies rather in its indirect, promotional, and advisory functions. Since its inception in 1947, it has established an international centre for the collection and dissemination of information on all types of exchange-of-persons activities, with particular emphasis upon subsidized opportunities for study and training abroad. Many centres exist in the world for information on national or bilateral exchange programmes. But no other exists on such a comprehensive scale for

documentation concerning multilateral and international activities in the field of the exchange of persons. Through the elaboration of a clearing-house system, a vast amount of detailed information has been collected over the course of six years.

The studies based upon this information contribute not only to the development of more effective administrative procedures, but also to the fund of experience which can be put at the disposal of governments, educational institutions and individuals who wish to use international study programmes as a means of educating people for living in a world community. In this way UNESCO, through its Exchange of Persons Programme, can have a far more pervasive impact on a far larger number of persons than could be achieved through the award of fellowships alone.

Each year, inquiries are undertaken concerning the international scholarships and fellowships through which foreign study opportunities can be obtained; the summer schools or vacation courses abroad that can be attended; and the numbers, fields of study, and nationalities of foreign students enrolled in the universities and institutions of higher learning throughout the world. Other sets of inquiries are directed towards university teachers wishing to find posts abroad; universities which may wish to take advantage of such offers of service; youth and workers' organizations prepared to offer assistance and services in connexion with educational travel; information is also collected concerning such various subjects as passport, health, and currency formalities required of persons travelling for educational purposes; methods and results of evaluating exchange of persons programmes; techniques for conducting surveys of specialized personnel as a means of assessing needs for overseas training.

On the basis of this information, numerous individual and governmental queries are answered, and five publications are issued regularly. The publications are:

Study Abroad (International Handbook, Fellowships, Scholarships, Educational Exchange). Volume VI, published in 1954, lists over forty-five thousand individual opportunities for subsidized study and training abroad. It also includes a chapter contributed by the International Labour Organization on exchange programmes for trainees in industry.

Vacations Abroad (Courses, Study, Tours, Work Camps). This companion volume to *Study Abroad* lists shorter-term opportunities for educational travel.

Travel Abroad (Frontier Formalities, Facilities for Educational Travel). Passport, visa, health and currency regulations are given for over sixty countries, and particulars are included concerning a large number of organizations which are prepared to assist in the educational travel of young people. This publication appears in loose-leaf form, to which amendment sheets are added monthly. It

also includes annexes on such matters as the reduction of fares for group travel by land, sea, and air.

Teaching Abroad appears as a supplement to the quarterly *Bulletin* of International Association of Universities. It gives lists, with particulars, of university teachers wishing to find posts abroad.

Workers Abroad. Volume II, published in 1953, included illustrated reports on the educational travel tours for workers organized by UNESCO in 1952.

The information and research programme in turn provides the basis upon which critical studies can be developed concerning the normative aspects of international education, thus introducing an element which gives greatly increased meaning and cogency to the whole Exchange of Persons Programme.

Problems concerning the international exchange of persons are, admittedly, highly complex. In Europe there is a long and distinguished tradition of foreign travel for educational purposes. In the present century this practice has spread to most other parts of the world, but in a form which differs greatly from the travelling scholar of past centuries. There is now an immense emphasis upon the acquisition of technical skills, particularly by persons from economically under-developed countries. This movement has been given a special impetus since 1945 by the many governmental and international programmes of technical assistance and economic development, most of which include provisions for training in technically advanced countries. This creates particular foreign student problems, relating not only to the acquisition of knowledge but also to adaptation to study conditions in strange lands. Further than that it raises problems of the general cultural relations between hosts and foreign students, and of the relationship between the acquisition of technical skills and the development of broader humanistic understanding. In short, it cannot be taken for granted that foreign study in all cases promotes better international understanding, or is even productive of greatly improved knowledge or skill. This is not a problem with an easy or immediate solution, but in trying to find some of the answers a large amount of information is analysed under the Exchange of Persons Programme.

The specific approach adopted by UNESCO depends upon the belief that a subsidized programme for study or training abroad represents an opportunity for the donors to direct the programme so that it produces the results they desire. Attention is therefore not limited to the longer-term, less tangible results of fellowship and training programmes; it is more particularly concentrated upon the processes of planning and administration through which the effectiveness of each fellowship can be ensured.

An important means through which the research programme in general is developed lies in a series of international meetings of experts on exchange of persons problems. The first of these meetings

was held in Paris in 1949. This was followed by further meetings at Havana in 1950, Cairo in 1951, and Bangkok in 1952. These meetings have given the opportunity for concerted discussion and exchange of information among fellowship adminstrators and the representatives of government departments and educational institutions. In the general context of the international exchange of persons, the particular problems of each particular region have been examined in turn. From the last meeting, in Bangkok, there has now emerged a more comprehensive document than ever before attempted on the principles and practices that should be followed in the planning and administration of international fellowship programmes. This document is published in Volume VI of *Study Abroad.*

Of equal importance is UNESCO's participation in the United Nations Technical Working Group on Fellowships. This working group meets once a year, with representatives from the United Nations Technical Assistance Administration and all the specialized agencies, to discuss common problems of fellowship administration and policy, and to act as the co-ordinating link on such questions for all activities undertaken by United Nations organizations.

Turning to the direct, operational activities undertaken by the Exchange of Persons Programme, there are, first, between sixty and eighty fellowships awarded each year, financed from UNESCO's normal budget. These are for mature persons, with good qualifications, nominated by the Governments of Member States, to spend about six months in one or more countries for study and observation in their special subjects. All these fellowships are closely related to projects or fields of study which are receiving specific attention in the UNESCO programme as a whole, for instance, fundamental education, arid-zone research, educational statistics, and audio-visual aids. These fellowships are supplemented by a further but variable number which are sponsored and administered by UNESCO but financed and donated by Governments and other organizations. These sponsored fellowships are also related to subjects of study of interest to the UNESCO programme, as far as the wishes of the donors allow. Altogether, more than four hundred normal and sponsored fellowships have been awarded since 1947.

Since 1950, nearly three hundred fellowships and scholarships financed under the Expanded Programme of Technical Assistance have been administered by UNESCO. About thirty countries have benefited from the scheme, with fellows and scholars taking courses in forty countries of study. In this operation, the whole resources of the Exchange of Persons Programme have been made available, based on experience gained from the administration of fellowships under the normal and sponsored programmes. This fellowship administration service has now been developed further, so that the Governments of Member States wishing to take advantage of the

system of placement and supervision that has been elaborated can place full administrative arrangements in UNESCO's hands.

In addition to the fellowship programmes, there are several 'special projects' for international exchanges among workers, youth, and teachers.

Apart from a small number of fellowships awarded to manual and non-manual workers, most exchanges so far carried out in this field have operated through the award of group-travel grants to parties drawn from trade union, co-operative, and workers' educational organizations. In this way travel costs have been paid by UNESCO, while hospitality has been provided in most cases by workers' organizations who are prepared to act as hosts in the countries being visited. The success of this scheme is based upon the community of interest between people doing similar jobs in different countries, even though their languages and customs may not be the same. All such tours have so far been confined to Europe, involving the movement of between eight hundred and a thousand workers a year, but plans are at present being made to extend the scheme to other parts of the world.

The exchange of young people is directly assisted through the award of about thirty grants a year to cover the travel costs of representatives of youth organizations attending conferences, seminars, or meetings of interest to UNESCO in regions of the world other than their own.

Exchanges of teachers, at both university and secondary school level, were operated under the 1952 programme, and may be continued and expanded at a later date. In 1952, "UNESCO University Courses" were initiated experimentally. Teams of three well-qualified university teachers in related subjects were recruited for one academic year's service in universities needing development in their subjects. Three social scientists—Dutch, Danish, and American—taught for a year in the University of Dacca, East Pakistan; and three chemists—French, Italian, and Austrian—paid a similar visit to the Central University of Carácas, Venezuela. Much interesting experience in university development was gained from this project, revealing how an international team can have a far greater impact than individual visiting professors.

Also in 1952, exchanges of secondary school teachers were organized in the Latin-American region and among Arab States. In each case there were reciprocal exchanges of teachers among the countries concerned, in which UNESCO paid travel and subsistence grants, and Governments paid salaries and housing allowances. Although certain of the participating countries, such as Mexico and Egypt, had already sent many teachers abroad, a feature of the scheme was that they too received exchange teachers from other countries which had not until that time organized missions of teachers.

UNESCO does not at present make grants for the international exchange of students at a primary or secondary level, although the latter might well be developed in future as a field of interest. Most other types of exchange involving educational, scientific, or cultural interests are, however, covered by specific projects, even though the need for economy of effort demands that the impact should be sought in a particular direction rather than thinly spread over a wide field.

But an understanding of how the impact of these projects makes itself felt can be reached only through a knowledge of their organization. The Exchange of Persons Programme, as all UNESCO activities, works chiefly through the Governments of Member States and through international non-governmental organizations. In all exchange projects, therefore, a large amount of co-operation is enlisted from government departments, UNESCO National Commissions, workers' organizations, and youth organizations, as well as from universities and agencies in countries of study which undertake administrative and supervisory responsibilities. In the selection of recipients of awards, and in the arrangement of travel and study facilities, an extremely important part is played by such organizations, so that the success of any particular operation depends not only on the UNESCO secretariat but also upon a network of co-operating organizations and institutions all working towards a common aim.

Likewise, the expenditure of funds cannot be measured in terms of the UNESCO budget alone. Considerable contributions are often made by the beneficiaries themselves. In the case of fellowships, Governments are often prepared to pay the fellow's travel costs in one direction as well as maintain his salary at home. And in the case of workers' and youth exchanges, for which UNESCO pays only travel costs, all additional expenses are borne by organizations or individuals. Therefore, a relatively small expenditure by UNESCO ensures a correspondingly greater impact upon the participants. And once the idea behind a certain type of exchange has been initiated and its methods of operation developed, such operations are likely to continue without the further participation of UNESCO.

This method of operations assumes that the function of the Exchange of Persons Programme cannot be performed through direct awards alone. Such awards can, at the best, provide for the movement of only a small fraction of the total number of persons willing and qualified to gain educational experience abroad. But in making provision for subsidies and experiments in fields of international study needing development, and in enlisting the co-operation of Governments and other organizations in such projects, a greatly increased impetus is given to the whole Exchange of Persons Programme. The co-ordination of these activities with the broader

programme of information, research, and advisory services ensures a practical and comprehensive means of developing international study as a method of pursuing the aims of UNESCO.

WILLIAM D. CARTER.

INSTITUTE OF INTERNATIONAL EDUCATION EDUCATIONAL EXCHANGE

IN 1951 the Institute of International Education, with the support of the Ford Foundation, initiated a research project to provide a guide for planning long-range, systematic foreign-study programmes that would assist technically under-developed countries in their economic and social development. Attention was focused on the needs of one such country, Syria, and the ways by which educational exchange could best be geared into its long-range development plans. The result of the pilot project on Syria was a ten-year foreign study programme outlined in *Foreign Study for Syrians, a Guide to a Long Range Program,*[1] directly geared to Syria's developmental needs. Over a period of years it would supply local supporting personnel for foreign advisers to Syria. This study showed that information can be collected which, under careful study, will yield patterns of effective exchange useful both to the country studied and to the American and other agencies working in the field of exchange of persons. The Syrian programme can serve as a preliminary guide to policy decisions and negotiations on the part of public and private educational exchange agencies working there.

One problem high-lighted by current public and private technical-assistance programmes is the need for technically trained indigenous personnel in under-developed countries. The part played by educational exchange in this problem is suggested by Dr. Cora DuBois, director of the Institute's research programme, in her introduction to the research paper on Syria:

> Changes in techniques and the things associated with them are achieved with relative ease. The introduction of scythes to replace sickles, or the replacement of water wheels with diesel pumps, presents comparatively simple problems. However, when changes affect social structures or deep-seated values, the complexity of the problems increases geometrically. A foreign expert cannot carry with him and demonstrate a banking system as he can a diesel pump. He must depend on those people of the country who are already prepared to understand his efforts and share his attitudes. To some degree the necessary changes of attitude in key people of a country must precede as well as accompany the work of foreign assistants. Foreign study and travel provide opportunities for such changes in people. It is, therefore, one of the basic ingredients, and an early step, in the many, different and interacting phases of change implied by that much too circumscribed term, 'technical assistance.'[2]

[1] Herbert H. Williams, *Foreign Study for Syrians, a Guide to a Long Range Program,* Occasional Paper Number 4, Institute of International Education Research Program, New York, January 1953.
[2] *Ibid.*

The role of the Institute of International Education in educational exchange is essentially an administrative one. Central private agency in the United States in the exchange of students, teachers, and specialists, the Institute administers exchange programmes between the U.S. and eighty countries. Each year approximately four thousand people study or train in a country other than their own through the Institute. In addition to private programmes under its auspices, the Institute administers those for foundations, government, and international organizations. It arranges study or training for foreign students and specialists as well as handling technical-assistance projects under which American experts go abroad.

Private-student Programmes

Typical of the private-student programmes administered by the Institute is one set up by a private foundation for Latin-American students. In this, as in other Institute programmes, the candidates' ability to contribute upon return to the development of their home countries is a major factor in the choice of exchangees. Other objectives are to increase the mutual understanding between the United States and the various countries of Latin America, and to assist these countries in the development of the body of leadership and skills necessary to their further economic and social progress.

Under this programme five fellowship holders spent the 1953–4 academic year at U.S. universities. A Bolivian at the University of Minnesota is studying dairy husbandry, an industry neglected in his native country due to lack of technically trained personnel. A student of architecture from Peru has been placed at Columbia University. He is training for a post as consultant architect for the government agency which plans public housing for Peru's under-privileged. An Argentinian, also an architect, studies architecture and town planning at Harvard's Graduate School of Design. At the University of Illinois a student from Guatemala is studying industrial chemistry. Planning to teach at the University of Guatemala, he hopes to promote utilization of his country's agricultural products and by-products for the development of small industry. A student of chemical and petroleum engineering at the Agricultural and Mechanical College of Texas will return to his position with Brazil's National Petroleum Council, the autonomous government agency charged with the petroleum development of the country. The development of petroleum exploitation and processing is considered of prime importance to Brazil.

The Institute's African student programme offers an example of exchange-planning for a technically under-developed area. During 1953 an officer of the Institute made a nine-week field trip to Africa to investigate the educational needs of individual countries and the possibilities of meeting these needs through educational exchange. In the resulting country-by-country report the educational resources

and general level of education in individual African countries were reviewed, as well as the needs of the country, the availability of suitable exchange candidates, the existence of alternative scholarship opportunities, and the strategic and economic importance of the area to the United States. American study was recommended only in fields in which facilities in the United States offered opportunities for study and training not available elsewhere. Fields in which Africans most urgently need training were reported to be agriculture, community development (adult and extension education), public health, veterinary science, public administration, engineering, educational administration, nursing, medicine, and home economics.

Special difficulties involved in exchange with Africa were listed in the field-trip report. In most African countries south of the Sahara the limited facilities for secondary education are a bottleneck to higher education. There are, therefore, only a limited number of Africans qualified for study in the United States, and there is urgent need for these individuals in their own countries. In British East Africa, for example, the number of Africans qualified to accept responsibility falls far short of the opportunities. In the Gold Coast the policy of Africanization of education and the civil service in preparation for home rule has created an urgent need for capable Africans. An exchange scholarship programme should not draw off too many of any country's qualified personnel. Another problem in educational exchange with Africa is the shock of the extreme shift between cultures which may defeat the young or immature student. On the other hand, if the student is successful in making the transition to American life, he may be alienated from his own culture. This is a special hazard of foreign training for Africans, since the completion of a course of study or degree may require four or five years abroad.

Since World War II the African student population in the United States has increased from approximately thirty-nine to more than six hundred. In attempting to improve existing exchange programmes with Africa, the Institute of International Education now has two goals: to promote economic and social development in Africa south of the Sahara, and to achieve greater mutual understanding between the U.S. and that area.

In addition to student programmes the Institute has, through its Department of Special Programmes, administered individual and group projects involving hundreds of specialists, leaders, and trainees. It has arranged all types of educational programmes for the foreign visitor, from consultation with professional colleagues or research in scientific laboratories to on-the-job training in American business or industry. In these the Institute has tried to be sure that the participants received the widest possible exposure to American life, customs, and culture, as well as accomplishing specific purposes in a chosen field.

UNESCO Activities

Each year the Institute administers the U.S. programmes of approximately a dozen UNESCO technical-assistance fellows. Since the essential purpose of UNESCO's technical-assistance programme is the economic development of under-developed countries, the technical-assistance fellowships and scholarships are awarded solely to enable the individual to develop or improve a technical skill which will contribute to the economic development of his country. Can he on return replace a foreign expert already at work, or can he be employed in a previously unfilled position? Fellows must be able to integrate their own qualifications and motives with the over-all plan or specific projects for economic and social development.

U.S. placement is usually one phase of the international experience of UNESCO fellows. A typical fellow in the field of educational administration visited the United Kingdom, Hawaii, the Philippines, and Japan, as well as the United States. The Senior Woman Education Officer, Department of Education, Hong Kong, she observed " a good cross-section of American education " with particular attention towards the trend to emphasize general education on all levels and in all types of schools.

Another UNESCO fellow, in the field of community education, studied and observed selected projects in the U.S., Canada, and Turkey. Her U.S. programme, sponsored by the Institute, consisted of observation of general community services, particularly in rural areas, with special emphasis on home economics, sanitation, budgeting, and child care and training. Upon return to her job as an Education Officer, Social Welfare Division of the United Nations Relief and Works Agency for Palestine Refugees, it is expected that she could encourage students to form co-operatives; adapt curricula to meet educational needs of students; develop the school as a community centre—developing evening classes for adults, and teaching students to live co-operatively; and through the school teach the community to make the most of its resources to improve nutrition, housing, and social services.

Iraq needs to have its own well-trained teachers in order to eliminate the need to bring in many teachers from other countries. A science teacher from the School of Agriculture, Baghdad, recipient of a UNESCO technical-assistance fellowship in the field of agricultural industries, has received training in the United States which he hopes may qualify him to serve as an adviser to his Government. Under UNESCO's scholarship programme, another Iraqi, a student in the field of mass education, came to the U.S. on a programme arranged by the student department of the Institute.

Special Projects

Three 1953 projects sponsored by the Ford Foundation demonstrate the work of the Institute as an administering agent in arrange-

ments for American specialists to go abroad. These projects are interesting examples of the way in which the Institute is adjusting its services to include not only the conventional types of exchange activity but also programmes where emphasis is on training for specific development purposes within a country.

A programme to aid basic education throughout India was established to assist the Government of India in improving its secondary school system. To strengthen India's selection and training of teachers, two American experts in secondary education worked with a team of British, Finnish, and Indian specialists developing plans to implement the recent recommendations of the India Secondary Education Commission. The project was established at the request of the Government of India to expand the school system, which suffers from a shortage of teachers. After six weeks in India meeting with the Government's Secondary Education Commission, studying the secondary school system there, and considering general aspects of the problem, the team started extended travel. In order to observe the practical application of educational theories in a variety of local situations, the team visited three countries, each of which offered a unique slant to the problems of secondary education. They spent four weeks in Denmark, four weeks in Great Britain, and eight weeks in the United States. In a final three weeks in India they made recommendations, trying to distil what is best for India from the variety of practice observed.

To improve the quality and quantity of teachers of English in Indonesia, ten English-language centres were established to train secondary school teachers in the teaching of English. The project was established at the request of the Indonesian Government and was carried out in co-operation with the Ministry of Education. Basic objective of English-language teaching in Indonesia is to have English taught adequately as a modern language, a vehicle of communication, to all pupils who have reached the first year of secondary school. It is also hoped to provide, in a minimum time, a reservoir of English-speaking nationals. These could use to great advantage advanced study opportunities in English-speaking countries, and could also profit from foreign instruction in English at Indonesian universities.

In an effort to increase India's national production and thereby create opportunities for remunerative work for the unemployed and under-employed, an international team of experts has assisted the Indian Government in planning a programme for the development of small-scale and cottage industries. This village industrialization project was established at the request of the Government of India and was carried out under the direction of the Ministry of Commerce and Industry. A team of American, Swedish, and Indian experts has investigated the present situation of village industrialization and has made suggestions for developing new and existing lines

in established industries. Recommendations were made for the establishment of an Institute of Technology for Village and Small-scale Industries. Team members were experts in the fields of co-operatives, development of handicrafts, business management and organization, and regional development. The Governments of Pakistan and Nepal have requested studies similar to that made in India. It is hoped that the results of the work in India will be extended to a survey of a similar type in these two countries.

When the report on the Institute's pilot project in Syria was published, Institute President Kenneth Holland declared:

> The Institute of International Education, for many years, has been concerned with the training of thousands of students from almost every country in the world. Valuable as much of this effort has been, it has often seemed diffuse when considered in terms of the massive human needs of the contemporary scene. Neither time nor resources should be squandered. It is in this context that a systematic long-range foreign educational programme, geared to a nation's own aspirations and needs, acquires significance.

More and more the Institute has considered its student and specialist programmes for technologically under-developed areas in terms of their contribution to the social and economic development of the countries involved. In keeping with its traditional goal of promoting peace and world understanding through education, the Institute has initiated and supported projects which send American skill and perspective to under-developed areas or which prepare foreign personnel to work in their own countries.

CHARLOTTE ELKIND.

CHAPTER EIGHT

UNITED KINGDOM EDUCATION AND DEVELOPMENT

IMPERIAL powers have usually brought more advanced technologies to the countries under their control, and this has been particularly true of the British Commonwealth and Empire. Private companies, soldiers, civil servants, and missionaries have contributed to colonial development. The governments of the United Kingdom have also played an important part, which ranges from the granting of concessions to the East India Company to the establishment of an empire-wide civil service. One aspect of all this has been narrowly educational through the growth of an educational service. It has always been educational in the widest sense.

Here the contribution of the United Kingdom is considered in its modern context. " For the first time in the history of the world an imperial power is, as a matter of set policy, divesting itself of its imperial authority and making great efforts to assist the people of its colonies to build up the forms of their own free government, leaving them to choose when the time comes what kind of political ties, if any, they desire to continue with their former masters." [1] This policy has, since the Second World War, been put into effect so that some countries, previously not self-governing, are now independent. The kind of assistance that can be given, and is acceptable, is limited—and to a great extent determined—by this fundamental policy decision.

Nevertheless there are some problems which are common to all assistance programmes. Of these the economic, the social welfare, and educational, and those connected with actual planning, loom large. Yet the possible solutions will, clearly, depend in an important way on political circumstances. For this reason the assistance given by the United Kingdom to her non-self-governing territories under the Colonial Development and Welfare Acts differs from that she can give to countries in South and South-East Asia under the Colombo Plan. Briefly, since 1929, the United Kingdom Government has been responsible not only for the provision of

[1] G. B. Jeffery: " Education in Other Countries: (ii) The African Colonies." North of England Education Conference, Programme and Papers, 1954.

capital and personnel for colonial development schemes, but to some extent for the policy and planning. Her participation in the Colombo Plan, initiated in 1950, has been that of one of a number of independent governments, each with their own plans, co-operating to meet the problems of economic and social development in South and South-East Asia.

Assistance to Non-self-governing Territories, 1929–45

Some of the difficulties associated with development schemes might be illustrated by a short account of the history of the Colonial Development Acts. The first, in 1929, was clearly born of economic necessity. In this year the first symptoms of the world-wide economic depression of the 'thirties were felt. That the schemes were intended to offset this impending slump by promoting mutual economic benefits between the United Kingdom and her non-self-governing territories is perhaps clear from the terms of reference of the Colonial Development Advisory Committee. They were " to consider and report on . . applications made for assistance from the Colonial Development Fund, in furtherance of schemes likely to aid and develop agriculture and industry in the Colonies, Protectorates and Mandated Territories, and thereby promote commerce with or industry in the United Kingdom by any means specified in . . . the [Colonial Development] Act." [2] Whilst conscious of the limited—and reciprocal—economic purposes of the Act, the committee, in their last report, pointed out that they always framed their recommendations as part of a " long-range policy of colonial development ". Nevertheless, in considering applications, distinctions were made between expenditure on development and on recurrent administrative expenses. The latter should be met out of normal revenue. Unless the possibilities of permanent benefit were clear, applications to help temporarily depressed industry were not to be entertained. Further, the committee took care not to support the initiation of schemes which they thought could not be maintained and supported subsequently by the Colony itself. In all this the substantial financial participation of the Colonial Government, promoting, as it would, lively and effective interest in any scheme, was held to be important.

However, the economic crisis of the 'thirties was disastrous for some Colonial Governments. Their resources were quite inadequate to meet demands. The educational service suffered; few vacancies occurred after 1931, and even in 1939 there was little prospect of increasing recruitment. Indeed—and perhaps misguidedly—only technical education was eligible for assistance. Nevertheless, in the eleven years of the committee's operations a total assistance programme of nearly nine million pounds—either as loans or as free

[2] Colonial Development Advisory Committee: *Eleventh and Final Report*, July, 1941, Cmd. 6298.

grants—was recommended towards a total development programme of over nineteen million pounds. Of this, about 30 per cent. was for internal transport and communications, 16 per cent. for public health, and 10 per cent. for water-supplies and water power.

The restriction to schemes of material development not involving long-term recurrent expenditure was criticized in the committee's last report. For it "limited the value of the Act in those territories whose finances were weakest and where the need for assistance was, therefore, most felt" The committee considered that some analysis of the total resources and needs should be made in order that a comprehensive plan of assistance could be prepared. Clearly some assessment of the educational needs would be required, for the ability of a colonial government to support any scheme initiated depended much on the presence of trained personnel as on any other single factor. The Colonial Development and Welfare Act of 1940 "marked a decis change in policy"[3] Social services, including education, became eligible for assistance. Five million pounds a year—a fivefold increase—were made available, with a further half a million pounds for research. Unfortunately unused moneys from year could not be carried forward to meet rising expenditure.

The need for long-range planning based on a comprehensive picture of the country's needs emerged as an important factor in the success of development schemes. It implied further that the programmes should not be too narrowly economic. In many cases the local staff proved inadequate. For the poorer Colonies, lacking perhaps a developed educational system, this was particularly serious. Until economic development schemes received such support, short-term economic planning was likely to prove abortive. Investment in long-term programmes, including support for recurrent administrative expenses from which quick profits could not be expected, was required. These should contain schemes to strengthen local staffs "to enable them to cope satisfactorily with the problem". Needed, too, were trained personnel who could provide realistic and reliable information on the needs and potentialities of the country. Many colonial territories did not command this expertise. The committee felt themselves at a disadvantage in being limited to making recommendations only on schemes referred to them.[4] Without having at their disposal a general review of past developments, present needs, and future potentialities, and without being able to initiate inquiries, any judgement on whether or not local governments could maintain any initiated project was extremely difficult.

Colonial Development and Welfare Acts since 1945

The lessons learned were incorporated in post-war Development

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[3] *Fifth Report from the Select Committee on Estimates,* Session 1947–8: Colonial Development.

[4] Colonial Development and Advisory Committee, *op. cit.*

Acts. Just before the end of the war the provision for colonial development was increased in the Colonial Development and Welfare Act of 1945. Over-all planning was made possible. Each Government was advised how much it could expect to receive over a ten-year period, and was asked to draw up its plans of development. A proportion of the money was ear-marked to meet unpredictable rises in costs and to finance centrally administered schemes—such as research, higher education, and training for the Colonial Service—which would benefit all. The money to be spent in any one year was not limited to one-tenth of the total, but could rise to a maximum of seventeen and a half million pounds, of which not more than one million pounds was to be devoted to research. By the Amending Act of 1949, these limits were raised to twenty million and two and a half million pounds respectively, and that of 1950 increased the total to an annual maximum of twenty-five million pounds, while increasing the funds available for the ten-year period to one hundred and forty million pounds.

These financial arrangements thus made long-term planning possible. Responsibility for development was given to each Colonial Government which, in making its plans, was encouraged to take into account the contribution it could make from revenue or out of loans. Assistance was therefore to be directed towards, and integrated with, a comprehensively planned scheme of development.

Planning was made extremely difficult by post-World War II conditions. The United Kingdom, after six years of total war—during which her whole economy and energies had been geared to defeating her enemies—had tremendous problems of social and economic reconstruction. Materials and trained personnel were scarce. Yet the United Kingdom's domestic needs in housing, factories, electrical power, railway maintenance, rolling stock, and shipping, to mention but few of many, were considerable. Capital equipment was in demand everywhere. Social and political pressures for better standards of living were strong. Perhaps the greatest planning need was in priorities: and this was a world-wide problem. In some cases private firms—competing with governments—were able to get vital materials, sometimes at an enhanced price. To plan all this under conditions of shortage for forty-five countries, all of whom had been given a large measure of responsibility—and who desired even greater independence—yet who could not, in many cases, command the necessary planning expertise, was a formidable task.

The Select Committee of Estimates,[5] commenting on the underspending during the first years of the new schemes, maintained that this was the result of " planning from the top " rather than starting " with the colonial peoples themselves, their needs and potentialities ". Further, " rapid and effective progress requires the introduc-

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[5] *Fifth Report from the Select Committee,* 1947–8.

tion of methods of communal development in water-supply, agriculture, hygiene, domestic living, cultural values, self-help, and democratic organization ". It was impracticable to wait for the required number of experts; some kind of chain reaction was needed to start the process off. Experience suggested that short-term economic projects, unless planned in relation to the other factors, were not likely to succeed. As it was, " it is surprising that nothing in the evidence laid before your Committee suggests that, at the back of the extensive colonial developments now being undertaken or contemplated under the 1945 Act, lies a coherent strategy of economic planning."

In a departmental reply,[6] the Colonial Office made it clear that the two primary objectives of British colonial policy were: " To promote the best development of the social and political institutions of Colonial peoples, and to promote their true welfare in the widest sense " They distinguished between two types of planning. The choice between 'all-in' comprehensive planning and 'outline' planning in which the colonial peoples themselves were associated was made in favour of the latter. The former would, it was claimed, have been both administratively impossible and politically unwise. Nevertheless, as far as 'outline' planning was concerned, emphasis was placed on economic development in the belief that without it the improved standards of living desired could not be maintained. As the reports of the Colonial Development Corporation show, however, economic development is virtually impossible without careful consideration being given to associated educational and social problems. The solution of these demands long-term planning. The Colonial Office accepted that whilst development planning was conceived as the responsibility and creation of the colonial peoples themselves, clearly a balance between the different aspects of development was desirable. Individual governments were encouraged to enlist the support of the ordinary people in the country by having unofficial representation on development committees.

Against the charge of lack of a coherent strategy the departmental reply argued that " if the Colonial Office had laid less emphasis on local planning and greater emphasis on a 'coherent strategy' planned from Whitehall, of the kind which the Committee seem to advocate, there would have been mistrust and suspicion instead of goodwill and collaboration, and . . the practical results would have been less satisfactory than those yielded by the method of approach which the Colonial Office did in fact adopt ". Individual governments had been watchful lest development plans should merely cover and conceal the exploitation of the Colonies in the interests of Great Britain.

Within the outline planning certain policies were adopted. For

[6] *First Report from the Select Committee on Estimates*, Session 1948–9, Appendix 1: Colonial Office H.C. 25, 1948–9.

example, the Colonies were to receive separate allocations of commodities in short supply; as far as possible an order of relative priorities was to be drawn up; and it was decided to assess as far in advance as possible items likely to be scarce and advise the Colonial Governments accordingly. The problem of adequately staffing the Colonial Service was met in various ways. Wherever this was compatible with the needs of essential current work, fully qualified technicians were made available to train local staff for technical positions. The opportunities of the Colonial Service were brought before a wider public; candidates who had not been to a university but had gained experience in other ways were welcomed. The Colonial Governments were encouraged to give fuller opportunities to local personnel. Short-term contracts were offered to scientists and technicians with the highest qualifications and financed from development funds. Salaries, opportunities for study, leave, and improved conditions affecting family life were recommended. Many desirable improvements came within the responsibility of local governments; some were rejected. The recruitment from outside the Colonial Service of officers without recognized qualifications was not, on the whole, acceptable. Temporary transfer of personnel from the home service was difficult because there was a shortage of skilled manpower and no guarantees could be given in regard to promotion on a person's return.

Steps were also taken to improve the Colonial Information Services by working in close contact with the British Council in foreign countries; by looking after colonial students, improving their amenities, and making available to them publicity material; and by using the cinema to reach the peoples of the territories.

In the field of economic planning five broad areas of activity were recognized as requiring the application of capital.[7] These were: " (i) to obtain adequate knowledge of the resources of each territory; (ii) to maintain and improve basic economic services, especially railways, roads, ports and other means of communication; (iii) to secure improvements in the health and education of the people, which can only be sustained by rising productivity but are equally the essential conditions of expanding economic development; (iv) to maintain and improve existing industries; [and] (v) to develop the most promising new sources of production and new forms of wealth." The development plans prepared by Colonial Governments were concerned primarily with the first three tasks. The responsibility for schemes under the fourth and fifth headings was undertaken by the Colonial Development Corporation, participating at the invitation of Colonial Governments.

Colonial Development Corporation

The work of this corporation might be taken to illustrate some

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[7] *Op. cit.*

problems in planning economic development. The schemes taken up were based on the reports of various committees and specialist missions on the suitability of conditions for new or increased production. An attempt by the Colonial Office to survey generally the economic resources of each individual Colony was also being made. The frank reports[8] of the corporation make clear that some of the early plans failed through insufficient preliminary investigation, others through lack of good management, and so on. But the associated social and educational problems are important. The corporation is unable, however, under its financial terms to undertake responsibility for non-commercial development. An analysis of the successful programmes strengthens the view that long-term social welfare and educational schemes should be put into operation concurrently, and that expenditure on them cannot wait on local economic prosperity.

First, the co-operation and approval of the local people for any scheme should be gained. The Development Corporation stressed in its 1950 report that " any machinery, official or private, for consulting local opinion and needs will be used; special committees will be set up where necessary . . .". The 1951 report indicated that the task had been undertaken. Local residents were serving as directors on the boards of subsidiary companies; consultative committees had been set up, and representative bodies consulted. The Europeans working under the corporation had been encouraged to learn the local language; indeed, promotion depended in part on such ability. It was considered equally necessary that local people should realize that certain schemes would be handed over to them, or that in time the corporation would sell out, leaving them with full " managerial, technical, and financial responsibility ". Land-settlement schemes, such at the Niger Agricultural Project, held promise of winning the co-operation of the people who alone can make economic development programmes really work.

Under this scheme an area of sixty-five thousand acres was to be developed by making farms of about forty-eight acres each. The plan proposed ten villages of about eighty farms. Some of the problems are of interest. The land had to be cleared, roads made, old wells cleaned and new ones dug, and suitable crops planted. Unless the roots of the scrub were completely removed the bush rapidly grew again. This was a technical problem demanding the use of more and more tractors. Whilst local workers were quickly instructed in the skilful operation of these tractors, maintenance constituted a considerable problem. As long as the crops remained on the level of subsistence agriculture, mechanized cultivation was uneconomic. The agricultural programme being experimental, the best crops, rotations, cultivations, and techniques had to be dis-

[8] Colonial Development Corporation: *Reports and Accounts* (1950, 1951, 1952, and 1953).

covered. A demonstration farm was set up to carry out experiments. The yields from individual farms in the first village, Ndayako, varied tremendously. Good farmers had satisfactory crops; bad farmers produced little or nothing. There seemed little chance (1952 report) of a higher-value crop being obtained; yet revenue per acre would have to be quadrupled to make the project pay. The programme promised to be socially successful; it was hoped that it would attract increasing numbers of applicants, thus permitting a more careful selection of farmers. Expectations have not been realized. The corporation reported in 1952: "Many settlers unsatisfactory", and in the 1953 report admitted that the promising rural welfare scheme had failed. "Still unsolved technical problems", poor returns from crops produced, and political considerations were given as reasons. The implications are clear: the reciprocal influences of economic and social development are considerable. One cannot proceed satisfactorily without the other.

Although the active participation of the local people in development programmes was desired, some of the difficulties were made clear. Frequently there was a serious shortage of labour. Those available were inexperienced, were of poor physique, and frequently went sick; malnutrition was widespread. The workers lacked education. To solve these problems, medical services, training facilities, and food rations for workers were provided. Five undertakings had full-time doctors; there were six nursing sisters and some twenty trained dispensers in twelve specially built dispensaries. As the report pointed out, these facilities benefited the local population generally. Educational facilities have been regarded as the responsibility of the local administrations, but the corporation participated in the provision of schools where none existed. Vocational training has taken place usually on the job, but in some instances, e.g. for tractor drivers, building staff, and clerks, special training schemes were started.

Further difficulties have been experienced in the recruitment of a permanent labour force. Many development areas were extremely sparsely populated and workers had to be drawn in from considerable distances. Competition from other organizations, the reluctance of people to take up regular employment, and the limited use to which money wages could be put made recruitment difficult. The problems of keeping workers in areas such as East and Central Africa, where much of the labour is migrant, were particularly acute. In most cases, however, the turnover was rapid; "local employees rarely stay more than six to nine months, sometimes only a few weeks or days".[9] The solution lies perhaps in providing conditions not too dissimilar from those the worker has been used to. Settled communities—with shops and other amenities—in which not only

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[9] *Op. cit.*, 1950.

the worker but his family can live with other families, are needed. Good conditions of pay, the possibilities of training for promotion, the supply of rations, and the provision of gardens where extra food can be grown could contribute to the creation of a permanent, efficient, and contented labour force. Successful projects, such as the Macalder-Nyanža Mines Ltd. and the Usutu Forests, where these kinds of attempt have been made, serve to confirm the view that essential to successful economic development is an enlightened policy of social and educational development. At the same time this policy needs the support of a sound economic programme.

Many schemes have suffered from the lack of satisfactory local management. Not only has it been difficult to obtain detailed and accurate information about local conditions, but also the problems of securing reliable and technically competent managers have been serious. There has been a shortage of trained specialists for work on the overseas sites. For various reasons the turnover of those working in the field has been high. Even so, more staff from the United Kingdom have been employed than will be the case when more local people have been trained for the semi-skilled and skilled jobs. By 1951 more than 60 per cent. of the 'white-collar' jobs in the Caribbean were staffed by local people. Two recommendations emerged from all this in the 1951 report: one was that suggestions for large-scale development must be treated with caution; the other, that care should be taken not to use too much expensive machinery or too many Europeans. Local resources of manpower are available, but at the moment the population is clearly unable either to assess the conditions sufficiently thoroughly or to maintain equipment on the scale demanded by large-scale projects of the kind known in Europe and North America.

Despite enormous problems, the Corporation reported for the year 1953 that 183 people were employed in the United Kingdom—a reduction on 1952—and less than nineteen thousand overseas. The number of executive members of the United Kingdom staff has been reduced, whilst increasing the number of executive officers overseas: 33 per cent. of the executive staff having been recruited locally in 1952. In this year nearly three thousand overseas employees were skilled and semi-skilled artisans, the rest unskilled. By far the largest numbers were engaged in agriculture, followed by forestry, animal husbandry, and then industry. The capital sanctioned was nearly forty million pounds. Fifty-seven projects were in operation throughout the world: in the Caribbean, the Far East, East Africa, Central Africa, West Africa, the Falkland Islands, and Tristan da Cunha. During the year, ninety-four proposals were investigated, of which fifty-seven were rejected and twenty-eight were still being examined.

Colonial Governments' Development Plans

In addition, support has been given through the Colonial Development and Welfare Acts to the plans put forward by individual Colonial Governments. It has taken, broadly, three main forms. First, money has been granted for schemes designed to benefit all territories. Some of these were narrowly educational. Provision was made, for example, for supervisors in the Universities of Oxford, Cambridge, and London; payments were made to these three universities for training probationers for the Colonial Administrative Service; grants were made for scholarship schemes to provide residents in colonial territories with pre-selection training for the higher grades of public service; and money was made available for the welfare of colonial students when outside their own territories. A mass education clearing-house (at the University of London Institute of Education) and an information service were established, and salaries were provided for the members of the colonial film unit.

Secondly, up to March 1953 nearly twelve million pounds had been made available for research. Almost a third of this amount had been spent on agricultural research, about 12 per cent. on research in fisheries, and 15 per cent. on medical research. Smaller amounts were spent in economic, insecticide, locust control, products, and social-science research. Fellowships were also established.

Finally, up to March 1953 a total of nearly a hundred million pounds, excluding funds for research, had been made available for development work. Territories in Africa, the Mediterranean, Middle East, Indian Ocean, the Far East, South-East Asia, the Western Pacific, the Atlantic, and the West Indies had benefited from the funds, the greater proportion of which had been made as grants, not loans. A tremendous variety of schemes was undertaken, but those which are narrowly educational loom large. For example, of the grants made in the period April 1952 to March 1953,[10] in Northern Rhodesia 60 per cent. was spent on African educational improvement; in Uganda about 34 per cent., whilst in Bechuanaland Protectorate only 13 per cent. Many receiving areas devoted a considerable proportion of their grants to the improvement of teacher training; Kenya established a teacher-training centre for African women, British Honduras a teacher and agricultural demonstrator training centre. Other countries improved existing facilities. Money was spent in the Somaliland and Swaziland Protectorates on trade schools, whilst, in the West Indies particularly, a great deal went into the construction of elementary and secondary schools. In all, since 1946, over 20 per cent. of the money approved under the Acts has been directed to the development of primary, secondary, technical (including vocational), and higher educational facilities. No other

[10] Colonial Development and Welfare Acts: *Return of Schemes from 1st April, 1952, to 31st March, 1953.*

single field of activity has taken up such a large percentage of the grants. Medical services absorbed about 14 per cent. of the total, and agriculture about 13 per cent.

Clearly the greatest proportion of the money has been used in the Colonial Governments' development schemes on social services. To examine all these schemes is impossible. A brief account of how the educational aspects of one of them [11] fit in to the general development programme may serve as an example.

Areas of Development

The main fields in which development is proposed under Nigeria's development schemes are in agriculture, education—general and technical—communications, medicine, health, and water-supplies. In all of them success depends on the recruitment of specialists and trained personnel. Looking at the plan as a whole, two distinct but mutually influencing educational efforts are discerned. Educational facilities were provided under various aspects of the scheme for special training of personnel. On the other hand the general educational system, based on missionary efforts, was being geared to meet the general demands of the developing country.

Thus at the Sokoto irrigation scheme trainees found in the area small projects of varying types on which they could work and gain the experience to work in other provinces. Experiments are taking place over a wide area on the use of fertilizers on yams at the School of Agriculture; later, the work was to be restricted to a narrower geographical unit to obtain more accurate information about exact applications. There have been set up farm schools and rural training centres in which the work is vocational and directed at the agricultural development plans. For example, breeds of poultry are compared, the strain of heifers and sheep improved, and workshops for agricultural engineering and machines have been developed to cope with the volume of incoming work. At the rural training centres, youths after training are expected to return to their homes, establish themselves on the land, and help in future community development.

Several community-development schemes, in which new roads, bridges, village halls, markets, and drainage systems are to be built, form part of the plan. In one of these, the Man-o'-War Bay scheme, five-week courses are run in which educational ideas borrowed from the Outward Bound Schools and the Jeanes School are incorporated. There are four sections to the courses. The first consists of lectures, demonstrations, and discussions on social problems; the second is devoted to visits to places of local importance; in the third, students are encouraged to develop physical courage, and fourthly they are expected to participate actively in community-development projects.

[11] *Annual Report on the General Progress of Development and Welfare Schemes, 1951–2: Nigeria.*

Several community centres, family-welfare centres, boys' and girls' clubs, and young farmers' clubs support these efforts.

Special development officers are being trained to work in the field on development programmes. Their role is a supervisory one on the actual job in field planning and execution. They are also training Nigerians to take over from them. Eighty-one were working in 1953, of whom sixteen are Nigerians. An example of the kind of training given in other areas of development and supported by development funds is a textile training centre. This encouraged applications from people only in the neighbourhood, and the number of looms throughout the whole country in the various centres increased. The training of nurses, midwives, sanitary inspectors, and pharmacists has been undertaken in new institutions or existing ones.

Under the Colony Development plan, selected sections of education have been chosen for support. These are, broadly, general education, technical education, and the Nigerian College of Arts, Science, and Technology. Within the field of general education, secondary and teacher training have been selected for expansion as " a vital pre-requisite for expansion of all forms of education ".[12] Thus, of the three million pounds planned for general education, two million seven hundred thousand pounds was for the secondary stage and for teacher training. Further, much of the money was spent on existing institutions. The majority of schools which were assisted under the plan have existed for some years, and continue to use most of the old buildings as well as new ones. Eleven new training centres have been established under the development-plan funds, but some existing centres have been extended on their original sites or on new ones. Thus, in the Eastern Region, two thousand eight hundred places for boys and six hundred for girls over and above those available before the commencement of the plan have been made available.

The objectives of technical education—in which a further four million pounds is to be spent in the five years up to 1956—are: to train under modern apprenticeship conditions highly skilled artisans; to provide technical institutes for practical and theoretical training for technicians who have completed primary and secondary schooling; to provide manual instruction in handicraft schools for boys in the fifth and sixth grades of the primary schools, and to provide in these centres vocational courses for adults in the late afternoon and evening.

Thus, in the Enugu Trade Centre in the Eastern Region, apprentices in carpentry, as fitter mechanics, motor mechanics, cabinet-makers, painters and decorators, blacksmiths and welders, sheet-metal workers, and electricians have been trained. This centre " is

[12] *Ibid.*

excellently equipped; it has earned very favourable reports from visitors, and enjoys in the district, and even farther afield, an enviable reputation for the quality of its work amongst the general public." [13]

Assistance under the Colombo Plan

The specific needs of each of the original Asian members of the Colombo Plan—India, Pakistan, Ceylon, the Federation of Malaya, Singapore, North Borneo, Sarawak, Brunei, Burma, Thailand, and the Associated States of Cambodia, Laos, and Viet-Nam, and Indonesia—clearly differed in detail, but certain broad general needs similar to those experienced by the colonial dependencies could be recognized; in agriculture, communications, irrigation, and power- and water-supplies. The conditions under which the Colombo Plan was initiated were sufficiently different to be of interest.

World War II had the twofold effect of reducing the material resources of the areas under consideration whilst at the same time expanding and accelerating the desire of the peoples of Asia for political independence and social advancement. If they had known poverty for a long time, war devastation and occupation by armies—whose policy in retreat had been to deprive their foes of industrial resources, means of transportation, and communications—left them after the war worse off than before. The 570 million peoples of the South and South-East Asian countries make up one-quarter of the world's population, and whilst they live in an area which is a major source of food and raw materials for the rest of the industrialized world, their struggle is not so much for a better standard of living as for existence. The average calorific value of food consumed per day is about half that regarded as adequate in the United Kingdom. Lacking, too, is that variety in diet which, in an empirical way, provides the ingredients for health. Where an average figure is low, many people may enjoy an adequate diet and be well clothed, and yet great numbers will exist well below subsistence level. Production per head over the previous ten years had deteriorated, making the position even worse. At the same time the population has been rising everywhere at a rate which, if maintained, would increase the population by 26 per cent. in twenty years. There was thus a need for extremely rapid economic development if the standard of life was to be maintained, let alone improved. Yet this was one of the most important tasks of the governments participating in the Colombo Plan. For social and political stability, it is sometimes thought, follows economic improvement.

Some comparison with the industrialized countries is needed if the problems faced are to be appreciated. By far the largest element in the national incomes of South and South-East Asia comes from

[13] *Ibid.*

agriculture, but whilst in Great Britain about sixty people depend on agriculture for every thousand acres cultivated, in Ceylon there are nearly one thousand two hundred. Many more people per acre work on the land in Asia than in the West. In India three hundred and six million acres are cultivated by seventy-three million workers; in the U.S.A. a slightly larger area by only eight million workers. Some of the implications are clear. America has in use some two and a half million tractors, India only ten thousand. Further, thirteen million tons of fertilizers are used in the U.S.A. against two hundred thousand tons in India. If agricultural output is stepped up by Western methods the thousands released from work on the land need jobs, which only already developed large-scale industry can provide. Western agricultural methods have to be backed by industries producing fertilizers in the quantities required. If there are no such industries, fertilizers must be imported. How are they to be paid for? Agricultural development in these countries requires large-scale irrigation; in turn depending on the availability of power. In U.S.A. nearly two thousand times more units of electricity were produced per head of population than in India; and in Great Britain nearly a thousand times as much. Similar comparisons could be made between industrial consumption of other basic products, such as steel, petrol, and so on. Clearly large-scale agricultural development on the Western model and at the speed envisaged demands large-scale industrialization.

The situation economically was also difficult. During the war the balance of trade between East and West had changed. Instead of a dollar trading surplus, which Asian countries had enjoyed previously, many, after the war, had dollar deficits. Secondly, before the war the development of these areas, however slow, had been maintained by a flow of capital from Western Europe, particularly from the United Kingdom. The post-war political uncertainties made private investors reluctant to risk their capital. One clear need, then, which the United Kingdom, as a participating member of the Colombo Plan, has tried to meet has been the provision of capital. Sterling balances of approximately forty-two million pounds per annum have been released to India, Pakistan, and Ceylon in accordance with the agreements concluded in 1950–1. Furthermore, in 1952 a Commonwealth Development Finance Company was set up in London to assist sound projects within the Commonwealth, and an agreement was reached with the International Bank for Reconstruction and Development to make loans available for Commonwealth countries in the sterling area.

Fundamental to the policy of providing financial aid under the Plan was the recognition of the complete political independence of the countries in receipt of it. The implications were far-reaching. Any requests to the United Kingdom for assistance are initiated by the autonomous government of the country concerned; the use to

which the money is put is in the hands of that government. The basic policy of development in the areas covered by the Colombo Plan is determined by individual governments in the light of their own six-year plans. Independence has meant in some areas that governments have been unwilling to retain permanently—in India, for example—large numbers of British personnel trained in administration, business management, and with high technical skill. The political factors—recognized and accepted by the United Kingdom—limit the assistance she can give. Out of her hands was taken, for example, the policy and details of planning except in an advisory capacity.

Social and Educational Problems

Fundamentally the social and educational problems of economic development are similar. In Western countries—at whatever historical cost—industrialization is now backed by a more or less adequate educational system which provides the industrial machine with literate workers and trained technicians. The institutions in which they are trained have developed over a great many years, and rather rapidly in the last hundred years. They have produced, broadly speaking, three kinds of educated person: an *élite* to provide political, moral, and intellectual leadership; a growing number of administrators, clerks, skilled and semi-skilled technicians; and a great many unskilled but nevertheless literate workers. In countries in which industrial development has been slower and in the hands of foreigners most of the specialists were foreign, nearly all the unskilled men were local, and a class of local clerks was being built up. Under programmes of industrialization the most pressing demand is for the middle- and lower-grade technical workers. They are needed not in their thousands but—to quote from the second annual report of the Colombo Plan—in their millions. Foremen, skilled and semi-skilled workers can, the report continued, be trained more economically locally. Yet most South and South-East Asian countries are simply unable to provide literate young people in sufficient numbers for technical training. Meanwhile the equipment has to be maintained, and the United Kingdom sends out workshop foremen for a limited period to look after the equipment until somebody locally can be trained to do the job.

In this context the United Kingdom "has devoted particular attention to supplying technical equipment for training and research institutes".[14] In Pakistan, for example, equipment is to be supplied for a cotton-textile centre. Also the equipment for a laboratory to serve as the nucleus for the Department of Scientific and Industrial Research laboratories. Similarly, equipment to the value of twenty-five thousand pounds is being supplied to the Patel Chest Institute,

[14] *The Colombo Plan: The Second Annual Report of the Consultative Committee on Economic Development in South and South-East Asia.*

Delhi, as well as books and scientific and research apparatus for other institutions in India. Whether the supply of equipment will be met by an ability to staff the institutions with adequately qualified men is doubtful. In Pakistan most of the staff for the eight technical schools under development, it is thought, might be recruited locally. A British expert—a former inspector of schools—however, was provided to advise on the establishment of the schools, and some of the most responsible posts in them might have to be filled by foreign specialists. Pupils will enter them at the age of 13–14 years and pursue four-year courses rather similar to those given to pupils in English junior technical schools. But on completion of such courses the pupils cannot really be regarded as trained for industrial work: schemes of further education are also needed. These might well be in apprenticeship or in institutions of further technical training such as the one in Lahore.

The emphasis on the provision of training facilities in their own countries is a long-term policy. The report pointed out, however, that whilst " it takes time to develop institutions of this kind, . . unless the task is attended to urgently some of the projects now being started may wither away owing to lack of trained men of all kinds ". Some idea of the magnitude of the task may be gained from Pakistan's proposal to provide under their plan, 4,460 new primary schools, 1,456 middle schools, 400 high schools, 15 teacher-training schools, and two teacher-training colleges, as well as technical institutes and research laboratories. In the U.S.A., with its vast and developed resources, the number of secondary schools grew from 24,000 in 1930 to 28,000 in 1950. The building force needed to erect the schools, the teachers required to staff them, the lecturers and administrators essential in the system can be imagined. Yet of the proposed expenditure on development plans only 11 per cent. was allocated for education. And this might be considered as high.

Whilst the fundamental importance of the educational instrument might be recognized, the small planned percentage expenditure on education in the various countries reflects an order of priorities.

Experts

A partial solution to the vicious circle which is acceptable to countries in receipt of aid under the Colombo Plan is the provision of ' experts ' to advise on and direct certain projects. The Commonwealth Relations Office in the United Kingdom helps to meet the requests for experts under the Plan. A wide variety of professional and technical persons has been provided. There are several ways of tackling the selection of a suitable person. On receipt of a request the authorities in the United Kingdom might suggest that a firm should be approached. Under these circumstances the firm might make direct contact with the requesting government; and send out, as a commercial proposition, its experts to survey the project and

report on requirements. More often than not the requests are for individuals, and the Commonwealth Relations Office either recommends men known to be competent and likely to be acceptable, or in other cases, advertises the post in the open market.

Help is provided, too, by the Ministry of Labour. "The Technical Personnel Committee was also concerned with measures for stimulating the recruitment of British experts for important overseas posts in under-developed countries, and another sub-committee advised the special unit set up in the Ministries Employment Services Department to deal with requests for those experts. . The majority of requests came from the United Nations and the associated specialized agencies. But substantial numbers arose under the Colombo Plan and from the needs of governments in the Middle East."[15] The Ministry also concerns itself with the placement of applicants from overseas for industrial training. Several were received from Asian countries. Another aspect of their work is training within industry for supervisors, members from overseas being trained by the Ministry to enable them to return home and present training programmes there.

The longest proposed stay of any expert under the Colombo Plan has been five years, most of them being for one or two years. The majority of experts are eminent people in their own special field. It may be questioned whether the most eminent person is necessarily the best choice. A younger man, prepared to stay longer, or several working in a group, might from the purely technical point of view serve the need rather better. Prestige reasons demand that the expert shall be the most eminent man available. Political reasons, whatever the advantages, make it often impossible for capable young men to make a career there. There is a reluctance on the part of experts to take up temporary jobs abroad in a period of full employment in developed countries.

Trainees

The request for experts is one aspect of a short-term policy of preparing and executing plans as rapidly as possible which will result in increased production in the shortest possible time. Another aspect is the sending of trainees to the West. The United Kingdom has received a total of 381 trainees as at the middle of 1953. Of these, sixty-nine came for training in administration, sixty-six in fuel and power, fifty-seven in agriculture and forestry, forty-eight in transport and communications, and forty-two to be trained in medicine and health. Nineteen trainees came in the field of education. The United Kingdom has arranged a special course for teachers for the technical schools being set up. "In most cases the training is designed to widen the trainee's experience and so to make

[15] *Annual Report of the Ministry of Labour and National Service for 1952*, Cmd. 8893.

him more proficient when he returns home in the job which he was previously doing. In other cases, the aim is to give trainees the experience necessary to enable them to staff new projects in their own countries and to develop the sort of training facilities which at present can only be obtained abroad."

When in the United Kingdom the British Council is responsible for the welfare of trainees under the Colombo or Colonial Development Plans. They usually take courses already available for the British, but occasionally, as in the case of a course organized by a firm of insecticide manufacturers, special courses designed for their needs are provided. There seem to be no courses designed to help trainees apply their knowledge to the special circumstances of their own countries. At the London Institute of Education, of course, there are courses in Education in Tropical Areas which are intended to meet this need in education.

Generally there " has been a considerable shift in emphasis of programmes for trainees going overseas to be concentrated on the provision of technical skills and practical experience rather than the mere acquisition of University degrees ".[16] Yet the key men in European industry tend to be those who have gained their knowledge and position through *long* experience. There is no short cut; and these men are needed in very large numbers. Indeed, the whole problem is that of attempting to compress into a few years a process which in the West took some two hundred years, and involved an enormous cost in human misery.

Conclusion

No attempt has been made to survey the whole of the United Kingdom's technical-assistance programme. Some attempt has been made to illustrate from official reports what has been attempted over the last quarter of a century, and to indicate the policies—and their changes—pursued. The changes in policy reflect changing conditions and failures. The failures are well known; what success there has been is less widely publicized. They also reflect the attempts to tackle the problems which quite clearly exist in technical-assistance programmes.

One of these is in the field of planning itself. Over-all planning depends for its success on accurate assessment of resources and needs and a ruthless implementation of policy. If the techniques for the one are rudimentary, the latter is unacceptable to governments working through democratic institutions.

If outline planning is accepted, then some order of priorities should be drawn up. The success of future efforts will depend [17] on three conditions. " First the governments must concentrate on the

[16] *The Colombo Plan Technical Co-operation Scheme: Report for 1952*, by the Council for Technical Co-operation.

[17] *The Colombo Plan: Second Annual Report*, 1953.

essentials of their programmes and must make the fullest use of their resources, human, material, and financial." This suggests that a balanced programme of development need not imply that it is extended over the whole social and economic structure of the country. More effective might be the balanced social, economic, and educational development of suitable selected aspects. Political demands make this difficult even for independent governments in their own countries. But the result of bowing to popular demand might mean that nobody benefits.

The second condition is that sound internal policies designed to check inflation and secure the highest possible level of saving and investment must be pursued. This demands a measure of social education and an appeal to a sense of duty and national feeling which, under conditions of near starvation, may be too much to ask of people. Thirdly, the present flow of external capital must be maintained and if possible increased. Only the altruistic will continue to support programmes, however, which show no sign of being successful and in which they as investors have no say in policy and management.

The suspicions of the recipients of assistance might already be aroused, resulting in a failure to support the programmes initiated. One problem then is to make assistance programmes acceptable. On the one hand this might be achieved by material results; on the other, local governments have to see that the results of economic improvement are passed on to their people. Foreign investors, whether private firms or governmental agencies, cannot, except in a very limited way, ensure this.

BRIAN HOLMES.

CHAPTER NINE

U.S. TECHNICAL ASSISTANCE PROGRAMMES

ONE of the most vital developments of this century has been the construction in the past decade of a positive, productive programme of co-operation among the free nations of the world. For centuries past, 'co-operation' between nations has been largely a matter of military alliances. The present broad programme is military only to a limited degree. To a much larger extent, it is social, economic, and humanitarian.

It is a development that is steadily advancing the collective security and collective welfare of many millions of people in all parts of the world. It recognizes the interdependence of peace-seeking nations as a modern fact of life, and its long-range goal is to help preserve a lasting peace by achieving constantly expanding opportunities for better living for people of all races everywhere. Among its strongest elements have been the technical assistance programmes that have so quietly and unpretentiously wrought important improvements and built new hope within many countries in the past eleven years. There has been but little fanfare about them, both because they are sound, steady, plodding kinds of activities that are less spectacular than most others in the field, and because there is such general approval of them in all participating countries that a minimum of controversy has arisen.

The United States' technical assistance programmes have included co-operative activities with countries in Latin-America, Western Europe, the Near East, Middle East, Far East, South-East Asia, Africa, and the Philippines. Assistance and co-operation have covered a broad range of fields that basically affect standards of living.

Policy

Technical assistance has become a basic element of U.S. foreign policy. Simply put, it means the sharing of skills and modern production techniques among the free nations; the exchange of technical knowledge in the age-old battle against hunger and disease, poverty and ignorance in the underdeveloped areas of the world; helping peoples to help themselves. It is an integral part of the over-all effort to build the strength of the free world.

Technical assistance is, of course, entirely co-operative. It is pro-

vided only to nations requesting it. All programmes are undertaken by mutual agreement. But assistance varies with social, economic, and industrial development of individual areas.

U.S. public laws on mutual security and technical assistance contain pertinent statements of official policy.

The Mutual Security Act of 1951 begins:

> The Congress declares it to be the purpose of this Act to maintain the security and to promote the foreign policy of the United States by authorizing military, economic, and *technical assistance* to friendly countries to strengthen the mutual security and individual and collective defenses of the free world, to develop their resources in the interest of their security and independence and the national interest of the United States and to facilitate the effective participation of those countries in the United Nations system for collective security.

The Act for International Development of 1950 states:

> The Congress hereby finds as follows: (*a*) The peoples of the United States and other nations have a common interest in the freedom and in the economic and social progress of all peoples. Such progress can further the secure growth of democratic ways of life, the expansion of mutually beneficial commerce, the development of international understanding and good will, and the maintenance of world peace.
>
> (*b*) . . It is declared to be the policy of the United States to aid the efforts of the peoples of economically underdeveloped areas to develop their resources and improve their working and living conditions by encouraging the exchange of technical knowledge and skills and the flow of investment capital to countries which provide conditions under which such technical assistance and capital can effectively and constructively contribute to raising standards of living, creating new sources of wealth, increasing productivity and expanding purchasing power.

History

The United States began its technical co-operation with other countries before World War II, notably in Latin-America. In 1938 a law was approved to let U.S. employees go on temporary duty to governments in Latin-America, the Philippines, and Liberia. This action was followed in 1939 by an interdepartmental committee on co-operation with American republics set up to carry out co-operative tasks.

During World War II, the office of the Co-ordinator of Inter-American Affairs undertook emergency programmes for economic improvement. After termination of this office in 1946, the Institute of Inter-American Affairs was established the following year, and to-day functions as a part of the U.S. Foreign Operations Administration.

With the independence of the Philippines in 1946, the United States provided technical assistance along with other help to the new nation in its efforts to recover from the severe devastation suffered during the war.

U.S. technical assistance programmes began in Europe in 1948 to help speed European recovery, and were a part of the help given to Greece and Turkey, starting in 1947. Such assistance was given also by the U.S. military government in the occupied areas of Germany, Austria, and Japan.

At his Inaugural Speech in 1949, President Truman called for " a bold new programme for making the benefits of our scientific advances and industrial progress available for the improvement and growth of underdeveloped areas ", and the subsequent programme was launched under the Act for International Development of June 5th, 1950.

European Activity

Technical assistance to Europe for greater productivity began to take shape after officials of the Economic Co-operation Administration and European leaders reached the conclusion that European industrial people could gain from a first-hand study of the methods by which American factories were achieving record outputs.

In the fall of 1948, the Anglo-American Council on Productivity was formed to promote the exchange of industrial knowledge, methods, and techniques. Following the visit of the first E.C.A. technical assistance ' team '—a group of Norwegian trade unionists who spent three weeks in the United States in late December 1948—teams have come from Denmark, Norway, and Sweden; from the United Kingdom and France; from the smaller northern countries of Belgium, Luxembourg, the Netherlands, Iceland, and Ireland; from the Mediterranean and southern countries of Italy, Greece, and Turkey, and from Austria and Germany. By the end of September 1953 about 12,300 Europeans had visited the United States on these missions.

The nature of the technical assistance exchange with Europe is illustrated by the different vocations of visitors to the United States. Government officials, trade-union leaders, industrial executives, scientists, and agricultural technicians have made up many of the groups. Workers from foundries, steel plants, and textile mills have been included in the teams, as have technicians from some of Europe's strategic airfields and stevedores from important ports. They have talked with American steelworkers and executives, to airline operators, to textile manufacturers and mill operatives, farmers and farm equipment manufacturers, small innkeepers and hotel chain executives, electrical engineers, water-supply experts, and printers, and to experts in hundreds of other industries.

Hundreds of young farmers and home economists from Europe have lived with American farm families, and hundreds of young professionals have received in-plant training and advanced schooling in chemistry, metallurgy, engineering, and other fields. Free trade-union members from every western European country have

talked to their union counterparts in U.S. industries, visited them in their homes, and seen how they work for and enjoy the fruits of high productivity.

To provide a similar exchange, about 1,260 American industrialists, labour leaders, and technicians had visited Europe at the invitation of European countries to consult on topics ranging from plant layout to collective bargaining. The United States also had increased the flow of technical literature, films, and applied research equipment to Europe.

The costs of the services of the productivity and technical assistance programme for Europe are shared by the recipient countries and the U.S. government. The European country pays the costs of an American technician's ocean transportation to and from Europe and his transportation costs and daily living allowance while in Europe. The U.S. government pays the technician's dollar expenses in the United States, and, where necessary, his salary while he is employed on the particular project. As with other forms of U.S. assistance, the European country frequently sets aside, in a special account known as the counterpart fund, an amount of money in its own currency to match the dollar expenditures of the United States in these projects. Since 1951, 90 per cent. of this fund has been under the joint control of the country concerned and the U.S. government.

As a result of the technical exchange, an increasing number of industrial plants in Europe have reported substantial productivity increases, some as high as 50 per cent. Important increases have been made in agricultural production. And equally significant, the countries of Europe now are undertaking the exchange of technical assistance among themselves.

Under-developed Areas

Most of the technical assistance in the underdeveloped areas has been through the Technical Co-operation Administration and the Institute of Inter-American Affairs. In the Far East, however, the former Mutual Security Agency has had charge of technical assistance in the Associated States of Indo-China, Formosa, the Philippines, and Thailand, and for a lesser time in Burma and Indonesia. All of this work now is administered through the Foreign Operations Administration.

To understand the problem of the under-developed areas, it should be remembered that in the Middle East, South-East Asia, and much of Latin-America nearly 1,000 million people—two-thirds of the free world—are struggling to improve their lot and to maintain their freedom.

The United States seeks to share with these peoples the knowledge and the skills they need to develop their own abilities and resources. This goal is sought through sending U.S. and other

skilled experts into the co-operating countries to train the native peoples, and also through bringing local leaders and technicians to the United States for advanced training.

The U.S. government, in carrying out technical assistance programmes, draws on the specialized skills, knowledge, and experience of 169 American colleges and universities, foundations, research institutes, industries, and voluntary agencies, as well as federal and state agencies. More than 2,200 specialists, teaching by demonstration and example, were helping out in other countries in 1953. They seek not to do the job but to let the others learn how to do it on their own.

Co-operative Projects

All projects must be truly co-operative—in the financing, in the planning, and in the carrying-out of the work. First on the list are better crops, better health, and better schooling, with full attention to vocational training. Where suitable, effort is turned to the development of mineral resources, transportation, trade, and general projects of community development. In many areas improved use of streams for electric power and irrigation is of primary concern.

Every effort is made to carry out the programmes on a decentralized basis among the people themselves, rather than from the capitals of the countries. U.S. experts work right in the villages, or help devise new implements on the farms, or demonstrate new methods and practices. Care is taken to train the individual U.S. technician in the culture of the host nation before he leaves to take up his duties, so that he may work with understanding on a person-to-person basis.

Agricultural projects set examples of bigger yields by better seed, better use of fertilizer, improved livestock breeding, pest controls, and storage practices; by 'county agent' extension services, and by co-operative credit and machinery pools. Health projects include safe water-supply systems, sanitation, control of diseases, protecting the health of children, and setting up community health centres. Educational activities comprise the development of school systems, teacher training programmes, and adult education.

Training

In each country effort is made to train as many technicians as possible through local facilities and projects. Trainees from Arab states, for example, attend sessions at the American University of Beirut in Lebanon. The training centre for Latin-American technicians is in Puerto Rico. In India, training is given to village leaders in some thirty centres, a project carried on jointly with the Ford Foundation (a U.S. nonprofit corporation for social research) and the Indian government.

At the same time, other local officials and technicians visit the

United States to study at technical schools and observe farm factory-production methods that they may become training leaders at home. During the twelve months to June 30th, 1953, some one thousand two hundred technicians from other countries received advanced training in colleges, industrial plants, and governmental agencies in the United States.

Near East and Africa

In the Near East and independent Africa, as of mid-1953, some six hundred American technical experts were working with the technicians of host governments on many projects. Better seed, modern soil practices, better tools, and water for irrigation were bringing encouraging results. Disease controls were taking hold, whilst the training of teachers and improvement of facilities and methods were helping to expand rural and vocational education.

More specific projects varied according to need in the eleven co-operating countries—Egypt, Eritrea, Ethiopia, Iran, Iraq, Israel, Jordan, Lebanon, Liberia, Libya, and Saudi Arabia.

Among agricultural projects in Egypt were the reclaiming of wasteland and opening up of the areas for settlement, developing of a grain storage and handling programme to reduce loss of grain, livestock improvement, hybrid corn betterment, and dusting of cotton. Health projects here are directed towards combating dysentery, trachoma, and other filth-spread diseases.

One hundred acres of grass were made to grow in the Jordan desert by use of water-spreading techniques developed in the arid western ranges of the United States. This pilot project, to show what could be done, resulted in about two tons of hay per acre for the use of Jordan's livestock, and provided stubble for grazing. A central government laboratory will be devoted to plant culture, veterinary study, and general chemistry.

A land-resettlement programme is in progress in Iraq. In Libya new methods of dune fixation are helping to keep sand from engulfing the oases, and better wool-grading methods are boosting returns to growers. In other countries the use of new chemicals is helping in the control of crop pests and diseases. American entomologists have joined with United Nations and British workers to fight the locust plague in the Middle East, using 'dusting' techniques from aeroplanes.

In Iran, spraying of wheat fields with DDT and parcium solutions has made the grain much more resistant to destruction, and a DDT anti-malaria campaign has been carried out on a nation-wide basis; mobile health units are demonstrating trachoma and other treatments; deep water wells are being drilled, reducing water-borne diseases; in Teheran, work has begun on a water-treatment plant.

In Saudi Arabia a public-health programme is concentrating on preventive measures; additional water-supplies have been found,

whilst in Liberia eleven American doctors, nurses, and technicians have worked with more than three hundred Liberians in a programme of malaria control and campaigns against yaws, dysentery, sleeping sickness, and other diseases.

There are many educational projects. Under an agreement with Iraq, the University of Arizona is helping to develop an agricultural college at Abu Gheraib, for the teaching of agricultural courses and as a centre for research and agricultural extension. The University of Peoria, Illinois, is co-operating in establishing a technical training school in Baghdad.

The Oklahoma Agricultural and Mechanical College is working with the Ethiopian government to establish the Imperial College of Agriculture in Ethiopia, along the lines of U.S. land-grant colleges. Americans are helping to improve Ethiopia's primary and secondary educational systems, and technical, agricultural, and handicraft schools.

No one of these projects, whether it increases the wheat yield on a farm or cures a child of trachoma or opens another school, makes a major contribution in itself to an underdeveloped area. Taken together, however, these projects directly affect the welfare and living conditions of millions of people. Their combined contribution brings a better way of life, better living standards, and greater strength to the peoples of the free world.

South Asia

U.S. technical assistance in the four South Asian countries of India, Pakistan, Afghanistan, and Nepal seeks to help towards greater economic and community development.

India is emphasizing village improvement, and U.S. technical co-operation centres around this sizeable programme. In mid-1953, more than 120 American technicians were working with more than 1,000 Indians in village-improvement projects. The five major parts of this programme include development of food and agricultural resources, free education, improved health, community service centres, and small-scale industry.

A field report from one area illustrates the nature of the projects:

> In five of the villages, drains have been dug for the village streets; hundreds of cartloads of earth hauled in to grade the street. Every family has dug a compost pit; a small dispensary and a library have been established. The villagers are working toward a goal of sowing 100 per cent. of the their rice crops with new varieties.

Valley development projects are increasing irrigation and expanding electric-power capacity. The United States is helping dig 2,000 irrigation wells to provide water for a land area of about 640,000 acres.

In Pakistan, the U.S. technical assistance also focuses village development programmes. Training centres are being set up in both East and West Pakistan. Boosting food harvests, especially in view of food shortages in the country, is a primary goal. Locust-control work has helped greatly in reducing crop damage from these pests. The health programme concentrates on combating malaria, trachoma, and other diseases.

Assistance programmes also are helping Pakistan to establish power and transportation facilities, clear and reclaim land, increase irrigated areas, construct a fertilizer factory, develop fisheries, and carry out other advisable projects.

Agriculture, health, and development of mineral resources are included in the programmes of Afghanistan and Nepal. The core of Afghanistan's development programme is an irrigation and power project in the Helmand River valley to water about 450,000 acres of land.

Far East

In the Far East, U.S. technical assistance has been helping a number of nations, most of them newly independent, build the economic foundations for maintaining their freedom. Efforts have been directed towards increasing crop yields, getting needed manufacturing industries started, installing practices for better health and sanitation, and training citizens in required skills. To this end, more than 760 specialists from the Far East have visited the United States for the study of practices and techniques in agriculture, engineering, education, medicine, and industrial management.

Projects in Indo-China have included rebuilding and improving roads and ports, boosting the output of food and clothing, and building rice-storage facilities.

American experts have worked with local public health authorities to give protection against malaria to more than a million persons, to equip rural first-aid dispensaries, to treat trachoma victims, and to sink deep wells for safe water.

Technical assistance on Formosa has included the programme of the Sino-American Joint Commission on Rural Reconstruction. The J.C.R.R. has contributed notably to improving conditions of land tenure, rural health, and rural education. It has helped in seed improvement, fertilizer distribution, and pest control.

In the Philippines, U.S. technicians have helped to improve food yields, to develop industry, and to provide opportunities for training in public administration. Large areas of land have been opened for settlement, roads have been built, and improved rural health facilities have been provided.

In Thailand, American experts have used demonstration equipment in working with local technicians on modern mining methods, vocational schools for training labour, and rural health centres. Irri-

gation and plant-breeding experiments are under way. Help is being given towards increased rice yields, greater livestock production, organization of co-operatives, and improvement of the agricultural extension service.

In Indonesia, U.S. technicians are working to help grow more rice and corn, to modernize the fishing fleet, to create and expand industrial plants on the islands, and to improve the co-operatives. Progress has been made in the control of malaria. Schools have been set up to train nurses.

Prior to the termination of technical assistance to Burma on June 30th, 1953, the Burmese had been helped to improve rice-milling processes and storage facilities. American engineers aided in planning rehabilitation of the key port of Rangoon. Health projects included a vigorous attack on malaria.

American Republics

In 1953, a total of nineteen nations in Latin-America were using, through co-operative agreements, U.S. technical assistance. A large number of Latin-Americans trained under the earlier programmes were helping to carry out the 1953 operations. More than three thousand doctors and nurses, sanitary engineers and laboratory technicians, agricultural and industrial and transportation specialists, educators, and others have received training in the United States; and about twenty thousand Latin-Americans have received on-the-job training in their own countries.

Many of the co-operative techniques now being used in other parts of the world were worked out in the exchange with the nations in the Western Hemisphere. Here technical assistance has had time to prove its value. Hundreds of individual projects have been gradually taken over by local governments and made a permanent part of their programmes. This, in effect, is the goal of the U.S. technician: to work himself out of a job.

At first the inter-American programme centred mainly in the fields of agriculture, public health, and education. Later it expanded to other fields, such as industry, trade, highways, and public administration and finance. *Servicios* for increasing industrial productivity have been set up in Chile and Brazil. The projects are put into operation by U.S. and Latin-American technicians working together.

Agricultural projects involve research, home economics, extension services, and rural development—land clearance, irrigation, soil conservation, food storage and processing, weed and pest controls, better seeds, livestock management, and farm-equipment pools. Health projects range from water-supply and sewerage systems to health education and malaria control, and to hospitals, health centres, and mobile health units.

Costs

The cost of technical co-operation is small compared with other types of assistance. The entire U.S. expenditure for technical assistance in Europe, the Near and Far East, Africa, and the American Republics since 1948, for example, has been less than the cost of two modern aircraft carriers. The co-operating nations usually have assumed a large portion of the operating expenses.

Obligations of the United States for the technical assistance and technical co-operation programmes through July 1953, except for the early programmes in Latin America, amount to less than $367 million. Broken down, these figures are follows:

Europe (since April 1948) . . .	$62·3 million [1]
Near East, Africa, and South Asia (since mid-1950)	$245·6 million [2]
Far East (since mid-1950) .	$13·1 million
American Republics (since mid-1950)	$45·7 million [2]
Total	$366·7 million

Relation to UN and OAS

The United States has supported the United Nations technical assistance programmes by contributing about 60 per cent. of the total funds pledged, and by co-ordinating its own programmes with those of the international organization.

The United States also is contributing, not to exceed 70 per cent. of the total contributions, to the technical co-operation programme of the Organization of American States. This is the programme established by resolution of the Inter-American Economic and Social Council on April 10th, 1950. The programme began in January 1951, and is made up entirely of regional projects. Directed towards technical education, it provides training, instruction, and technical advice at regional training centres and educational institutions. Present projects cover control of hoof-and-mouth disease, teaching of agricultural extension methods, housing research, and training on administration of children's services.

Conclusion

In observing the over-all progress and results of the U.S. technical assistance programmes to this date, perhaps the most important point to recognize is that the accomplishments thus far are just beginning. This is not meant to indicate that money and basic technical manpower will be increased; rather, it is meant to illustrate the fact that the total programme is by nature a generative process.

[1] Includes overseas territories.

[2] Includes commodity assistance identified with technical co-operation programme. Excludes special economic assistance.

The work of the technicians, both American and within the other countries, has been devoted basically to *training* and *teaching*, so that there is a constantly increasing number of knowledgeable persons in each country who can carry on, and keep expanding, the many projects of self-improvement.

In addition, the pilot projects—the examples—have made millions of people in the various countries *aware* of the great advances which are now well within the capacities of themselves and their governments to achieve.

The concept of technical assistance is a genuine reflection of the new spirit of friendship, neighbourliness, and personal concern that is arising among the free peoples of the world. It is the American hope that this programme, with the other works of co-operation, will continue to strengthen the bonds that will so largely determine the coming course of world history.

PAUL G. HOFFMAN.

CHAPTER TEN

THE GEOGRAPHICAL BACKGROUND

MANY, though not all, of the world's undeveloped or under-developed territories lie within the tropics, and most of the areas still controlled politically by European powers are in the inter-tropical belt. Europeans have, during recent centuries, been able to dominate relatively easily the tropical regions of the world, which must, under present conditions, depend very considerably upon the white man for capital investment, administrative organization, and technological assistance. The poverty of many tropical peoples and their comparative lack of progress are often taken as indications of the difficulties of the physical environment of tropical areas. There is indeed much truth in this view, though it cannot be regarded as the complete story. These conditions do constitute, however, a sufficiently important element in the background of the world's under-developed areas and of its technologically backward peoples to demand a careful investigation of the geographical considerations which have important effects upon many current sociological and educational problems.

It is generally recognized that the topography, soils, climate, and vegetation of the inter-tropical regions do not present mankind with conditions in which it is likely either to prosper or to abound. Some years ago Professor H. J. Fleure suggested that such areas were 'regions of debilitation',[1] and, in stressing the influence that climatic and other conditions have upon health and progress, he emphasized what is widely recognized to-day, the very great effect that climate has, directly and indirectly, upon both body and mind.[2] He noted especially the closeness of the links between the physical environment and human activity, the correlation between physical adversity and relatively slight human progress. It is well to be reminded of the realities of these environmental influences in days when in some quarters there is a tendency to ignore, or under-estimate, the difficulties and dangers of the tropics. No longer do we speak of the 'White Man's Grave' in West Africa, and far less

[1] "Human Regions", *Scottish Geographical Magazine*, 35 (1919), pp. 94–105.

[2] See, for example, Ellsworth Huntington, *Civilization and Climate* (1915), C. A. Mills, *Climate Makes the Man* (1942), and S. F. Markham, *Climate and the Energy of Nations* (1942).

attention is given to some of the health precautions of the tropics than was formerly the case. This changed attitude may be partially responsible for the somewhat carefree attitude towards the tropics adopted by certain people in recent years. Politicians, sociologists, and educationists have too often acted as if the nature of the environment was to-day of minor concern only, and they have too readily assumed that the systems formulated in one part of the world can be applied, without any substantial modification, to areas that are, physically and sociologically, completely different. Serious errors of judgement and very costly mistakes, especially in the period since the Second World War, have, however, brought home the importance of the study of the environment in its widest sense as an essential background to, and framework of, all schemes for political, social, or economic advancement.

Topography and Soils

The tropics constitute a highly diverse and complex, as well as extensive, portion of the earth's surface. Thus generalizations, though often legitimate, may sometimes mislead, and detailed regional examples may often appear to contradict most of the broader statements that are frequently made about large tracts of these tropical lands. Topographically, for example, it is particularly difficult to give a summary account of conditions within the tropics. On the one hand there are limited, though significant, areas reaching more than 10,000 feet above sea-level immediately on or near the equator, particularly in the Andes of South America and in the East African plateau. By contrast, there are extensive tracts that are only 600 feet or less above sea-level, notably in the Amazon basin and in the numerous river valleys of South-East Asia. Africa, on the other hand, has very few low-lying areas apart from portions of the valleys of rivers such as the Niger and Zambezi: the Congo basin, it should be noted, is an area between 1,000 and 2,000 feet above sea-level, drained by a host of rivers that unite in the Congo river itself. Between the extremes of very high and very low land there is a wide range of topography and land-forms, though a very large part of the inter-tropical belt consists of plateaux of moderate elevation (2,000 to 6,000 or more feet above sea-level). These frequently represent the remnants of a great upland mass, known to geologists as Gondwanaland, and occurring in regions as far afield as the Deccan of India and the plateaux of Brazil, eastern and southern Africa, and Australia. They are made of very hard, resistant rocks and generally have only thin and unproductive soils. Many parts of these plateaux are remote from the sea, access to which is often possible only with some difficulty by way of the occasional breaches in the plateau rim. Such areas do not provide ideal homes for mankind or good prospects for economic development, and the density of population that they carry is usually very

low, ten to the square mile and often considerably less. The Deccan of India, with its relatively large population, is an exception in this respect, though even its average density of population is only low compared with the high figures recorded in the Ganges valley or in some coastal areas of India, such as Travancore.

In contrast to these very ancient parts of the tropics, there are some very 'young' areas where volcanic outpourings have occurred within geologically recent times. In East Africa, for example, all the higher areas are of volcanic origin, apart from the great resistant massif of Ruwenzori (16,795 feet) in western Uganda: among these volcanic peaks are Kilimanjaro, Africa's highest mountain (19,565 feet), and its neighbour Meru (14,980 feet) in Tanganyika, and Mount Kenya (17,040 feet). South-East Asia, particularly Java, has a much greater and more concentrated collection of volcanic highlands, whose slopes are covered with thick, fertile soils which are highly productive if farmed carefully. These soils go far towards an explanation of the fifty million people living on the 48,500 square miles of Java[3] and the relatively high density of population in some districts of adjacent islands such as Sumatra. On a smaller scale, they account for the concentration of population in East Africa on the slopes of Kilimanjaro, where the Chagga people obtain high yields from their food-crops as well as from their principal cash crop, coffee. These and other similar cases apart, there is much truth in the oft-quoted contrast between monsoon Asia with its teeming millions and the wide open spaces of sparsely-populated tropical Africa. The differences are not hard to understand once the contrasts in physical environment—and in agricultural techniques and in history and culture—have been appreciated.

Climate and Vegetation

Interesting though the topographical and soil diversity of the tropics may be, the really fundamental physical limitations of the tropical environment are imposed by the nature of its climate and natural vegetation. Most parts of the tropics are hot throughout the year, with relatively small changes of temperature with seasons. Temperatures are, however, considerably modified by altitude, and in more elevated areas the diurnal range—the contrast between day and night temperatures—is often very marked. The rainfall is the outstanding variable element in most tropical climates, both in its total amount and in its seasonal distribution. Parts of the tropics are very wet, with extreme examples such as Cherrapunji in the

[3] See P. Gourou, *Les pays tropicaux: principes d'une géographie humaine et économique* (1947), pp. 131–2, translated into English by E. D. Laborde and published under the title, *The Tropical World: Its Social and Economic Conditions and Its Future Status* (1953). Gourou quotes the case of the district of Adiwerno, with 4,240 persons to the square mile in 1930 over an area of 36 square miles, which he suggests has, for an area of that size, probably the greatest rural density of population in the world.

Khasi hills of Assam with an average annual rainfall of 457 inches, and very extensive areas receive eighty or more inches in the course of a year. Other parts, by contrast, are very dry: a high proportion of the world's deserts lies within the tropics, especially in northern Africa and south-western Asia.

Moreover large areas that have, by the standards of temperate regions, a rainfall that is more than adequate for settlement and agriculture—between twenty and forty inches a year, for example—do in fact suffer severely from drought, at least in some years, either because of the intensity of evaporation, or because of the nature of the seasonal distribution of rainfall, or because of the fluctuations in total rainfall from year to year. The manner in which the rain falls may in itself give rise to serious difficulties. Much of the annual total may come in a few torrential downpours which, occurring as they frequently do at the end of a prolonged dry season, when the ground surface is sun-baked and hard, may result in a very rapid run-off. Thus relatively little of this rainfall will penetrate the soil and, more serious still, there may be considerable erosion of such soil as there is, especially where slopes are steep.

For these, and other, reasons, maps showing the world distribution of average annual rainfall can mislead as well as illumine, and one is not, therefore, included here. Even maps for individual political areas often fail to indicate the true facts of rainfall and water-supply, so far as settlement is concerned. At first sight, it appears strange that there should be any over-population in countries like Tanganyika Territory and Kenya, with populations of only 7½ and 5¾ millions respectively; yet in fact over limited areas the land has to support far more people than it should, with existing conditions of rainfall, evaporation, run-off, soil fertility, and agricultural practice. In Tanganyika two-thirds of the people live on one-tenth of the total area, and two-thirds of the total land surface is virtually uninhabited, partly because of the widespread distribution of the tsetse-fly but mainly as a result of deficient water-supplies for man, crops, and livestock. Kenya has areas with what are, by East African standards, high densities of population, particularly in parts of the 'White Highlands' and in the borderlands of Lake Victoria. These are the better-watered areas where soils are fertile and temperatures are modified by altitude, and which are, in consequence, desirable to European and Asiatic immigrants as well as to indigenous Africans. By contrast the 150,000 square miles of the Northern Frontier Province (more than two-thirds of the total size of the colony) are waterless and unproductive and have less than 190,000 inhabitants, while a further 15,000 square miles provide a home for only 60,000 nomadic Masai pastoralists.

Natural vegetation generally reflects very closely the nature of the rainfall and the other climatic elements, as is illustrated by the above East African examples of inadequately watered and, therefore,

barren areas of scrub and semi-desert. At the other extreme, excess of rainfall often shows itself in the prolific growth of equatorial rain-forest vegetation, which may make the clearing of land for cultivation impossible and movement extremely difficult. The dense and luxuriant forest growth of the Amazon and Congo basins and of some of the equatorial islands of South-East Asia support only very small human populations. The average density of population in the Amazon basin, for example, is considerably less than one person to the square mile; and the Congo basin in tropical Africa is, after the Sahara desert, one of the least peopled of the larger regions of Africa, less than 20 million people living on more than 2½ million square miles, an average of fewer than eight persons to the square mile. Whatever may be the theoretical population-carrying potentialities of areas with tropical climates and vegetation, it cannot be denied that under present conditions neither the hot, wet lands nor the hot, dry lands support more than a meagre proportion of the world's total population. There is, however, one important exception, already noted, that of tropical Asia, whose vast populations and high civilization must make us cautious in reaching final conclusions regarding the inevitably deleterious effects of tropical climates on soils. There is, however, general agreement with Pierre Gourou's contention that "at certain stages in the development of technique and civilization, unhealthiness and the nature of tropical soils explain the small numbers of the population, the low standard of life, and the cultural stagnation." [4]

The Control of Environment

"It should be the aim of education," the Report of the Carnegie Commission on Poor Whites in the Union of South Africa stated, "to help people to control their immediate environment." [5] The preceding paragraphs have sketched in outline some of the main physical characteristics of the tropical environment. Where conditions so discourage human activity and initiative, and where physical geography so clearly sets limits to economic development, and possibly to social and political progress as well, it is obviously right to ask how far, and in what ways, can education or administrative action or technological progress help the peoples of the tropics to modify, let alone control, the environment in which they are living.

The nature of the European or American contribution to the solution of many problems in under-developed territories is obvious and does not need to be elaborated. The skills, the drive, and the capital resources of the West must play a very large part if mankind is ever to subdue and tame the tropics. Europeans and Americans can, by their means of communication, their machinery, their

[4] Gourou, *op. cit.*, p. 6 (quotation from the translation, p. 5).

[5] *The Poor White Problem in South Africa*, Report of the Carnegie Commission (5 volumes, 1932).

knowledge of crop rotations and fertilizers, and their organizing ability greatly assist the material, as well as the cultural, progress of tropical peoples, especially if they are able to do so with the confidence and, therefore, the co-operation of the people themselves. During the twentieth century railways, roads, and air services have opened up vast areas, including many that are remote from the oceans, such as Uganda and Northern Nigeria. Disease has been virtually eliminated from limited districts, such as the Panama Canal zone, and very greatly reduced elsewhere. Law and order have been established and cash crops introduced in many countries, while the exploitation of minerals has been made possible in areas as diverse as Malaya, Northern Rhodesia, the Gold Coast and British Guiana. Indeed so successful has the white man been in certain directions that some of his interventions are now giving rise to new sets of problems. Improvements in health, for example, are directly resulting in such a rapid growth of population that in some areas there are now signs of overcrowding, if not of over-population. Elsewhere enthusiasm for the cultivation of export crops, such as coffee in Brazil and cocoa in the Gold Coast, has not only caused the widespread destruction of the natural vegetation but has also adversely affected the production of foodstuffs for local consumption.

The white man is much less likely to claim that he has conquered Nature in the tropics to-day than he was a few years ago, partly because of the emergence of these new types of problems, but mainly because he has been forcibly reminded of the reality of the physical limitations and difficulties of tropical environments by war-time experiences in the Burmese, New Guinea, and other campaigns as well as by the complete failure of some of the great post-war developments like the East African Groundnut Scheme and the Gambia Poultry Scheme. The problems encountered in Tanganyika Territory, the Gambia, and elsewhere have very forcibly emphasized the fact that the methods appropriate to temperate lands cannot be applied, at least not without very considerable modifications, to tropical areas.[6] The difficulties of many smaller and less publicized schemes of economic development suggest that every area calls for special investigation and treatment. What can be done in, say, the Gold Coast will not necessarily succeed in British Guiana or Borneo, even if the geographical and ecological conditions may appear broadly similar.

The results of scientific research also explain the more cautious approach to the problems of the undeveloped parts of the tropics. The contribution of science has, no one would deny, been tremendous, but its lack of success in certain directions is equally signi-

[6] See, for example, S. H. Frankel, *The Economic Impact on Underdeveloped Societies* (1953), pp. 141–53 ("The Kongwa experiment: lessons of the East African Groundnut Scheme").

ficant. For example, nutritional and dietetic standards in most tropical areas remain deplorably low and, in the face of rapidly increasing populations (the direct result of scientific advances), it is often proving difficult to maintain, let alone raise, the standard of living. The tsetse-fly is still responsible for much disease in humans and animals in many parts of Africa, notwithstanding considerable progress in the fight against trypanosomiasis: and some observers even claim that this fly now occurs more widely than ever before and that it is among the most serious of the many obstacles to settlement in tropical Africa. Perhaps the most striking failure of scientific research to date is its inability to provide any practicable alternative agricultural system to 'shifting cultivation' or 'bush fallowing' for many of the tsetse-infested areas of Africa. Soil fertility must still be maintained not by intensive, permanent cultivation but by the abandonment of plots after the raising of only one or two crops, so that the soil may recover by lying fallow for some years. This is a system that is adequate, though scarcely efficient, where population density is low and the fallow period can be long. But often there is no longer enough forest land to permit a sufficiently long period of regeneration. This state of affairs may be caused by population increase, land settlement by Europeans, or the development of cash crops, but the results are always the same: excessive deforestation and the exhaustion and erosion of the soil, which are particularly serious in countries where nearly everyone is at present directly dependent upon the cultivation of the soil.

To these problems that arise from the physical habitat must be added the difficulties that are caused by political immaturity and instability (which affect in particular the flow of capital from elsewhere) and by the nature of the social environment. The innate conservatism of peasants throughout the world often seems particularly marked in tropical peoples; and in some regions their refusal to consider new methods or adopt new implements constitutes a major obstacle to their economic progress. The remarkable success of cocoa-farming by Africans in the Gold Coast and of cotton-cultivation in Uganda suggest what is possible where the people are enterprising and alive to new ideas. But perhaps more typical of the tropics generally is the very slow progress of new agricultural techniques in the Mohammedan areas of Northern Nigeria where, despite consistent government propaganda over a quarter of a century in favour of mixed farming (the integration of cattle-keeping and of cultivation with the use of ploughs), the number of mixed farmers is less than 100,000 out of a total population of over 18 millions. There is widespread agreement that one of the outstanding problems of many tropical areas is the need for an intensification of agriculture by the change from shifting to permanent cultivation, but the magnitude of the difficulties, social and economic as well as physical, must be recognized, and no easy or speedy solutions can be expected.

Economic Development

Fortunately at a time when there is a new appreciation of the limitations that the physical environment imposes upon economic development of every sort, the facilities for the study of the problems of under-developed areas and the means for grappling with them are greater than ever before. The Colonial Development and Welfare Acts have helped to transform the relationship between the Imperial Government in Britain and the colonial peoples, and their counterparts in other European countries with colonial responsibilities have had broadly similar effects. In each case there has been included, usually for the first time, some financial provision for basic research. Similar in their conception and their objectives are the Colombo Plan, the Point Four programme, and the work of the varied Specialized Agencies of the United Nations. There is now a determined effort to establish the facts as the essential preliminary to all economic and social planning: by way of example, mention may be made of the work of the Caribbean Commission, the various missions sponsored by the International Bank,[7] and, more recently, the undertaking of a comprehensive survey of Africa south of the Sahara directed by Dr. George H. T. Kimble and financed by the Twentieth Century Fund of New York.[8]

This new zeal for the recording and assessment of facts, combined with the unfortunate experiences of some of the hurried post-war schemes for economic development, suggests that in future those responsible for the opening-up of tropical territories will be content to 'make haste slowly'. Pilot projects are now greatly preferred to the grandiose schemes of a few years back, and in some instances no action has so far been taken on the recommendations of certain economic and settlement commissions, pending the fullest investigation of the social and political consequences involved.

One of the most encouraging features of the last two decades has been the increasing, and now widespread, recognition of the essential links between economic, social, and political advancement. It was shown most strikingly in the Development and Welfare Acts of 1940 and later years and in the establishment of the Development and Welfare Organization in the British West Indies.[9] Some of the most significant new developments of to-day are at least as concerned with the social welfare of communities and the settlement of new areas as with economic prospects, though the latter are not unimportant and cannot be ignored. In their long-term effects, relatively small projects like the Anchau scheme in Nigeria, the Makueni

[7] For example, *Economic Development of Jamaica: Report by a Mission of the International Bank for Reconstruction and Development* (1952).

[8] *Africa* (Journal of the International African Institute), 24 (1954), p. 61.

[9] See *Development and Welfare in the West Indies, 1940–1942,* a report by Sir Frank Stockdale, Comptroller for Development and Welfare in the West Indies (Col. No. 184, 1943), and later reports.

scheme in Kenya, and the nutritional investigations at Genieri in the Gambia may even rank in importance with great economic developments such as those based on the proposed generation of hydro-electricity at the Volta or Kariba gorges and at the Owen Falls. They are concerned with the settlement and rehabilitation of peoples, and thus they involve the education of communities in the widest sense, and their potential influence in the future is quite incalculable.

If the necessity for the integration of the economic, social, and political aspects of tropical development is recognized, and if at the same time it is admitted that all such developments must be carefully adapted to the framework imposed by the physical geography of the tropics, then there is no reason why real advances should not be recorded along a very wide front in many under-developed territories. Two recent books by Ritchie Calder dealing with the work of the Specialized Agencies of the United Nations, *Man Against the Desert* and *Man Against the Jungle*,[10] show what can be achieved by technical assistance that can enable men and women with less technical competence to help themselves. They suggest that it is not inevitable that millions in Africa or Asia or Latin America should be starved of the necessities of a healthy life. The victories are never easy and advances cannot always be maintained: but neither general retreat nor ultimate defeat is inevitable, provided that the full resources of the world are employed in the development of the tropics. Herein lies the challenge in education, on the local scale and in the short term, as well as on the global scale and in the long term. "There are no necessities, but everywhere possibilities; and man, as master of the possibilities, is the judge of their use," wrote Lucien Febvre some thirty years ago.[11] Perhaps education more than anything else will prove whether this is so in the case of what are to-day the under-developed and backward regions of the world.

ROBERT W. STEEL.

[10] 1951 and 1953 respectively.

[11] *A Geographical Introduction to History* (1925), p. 236.

CHAPTER ELEVEN

MILITARY OCCUPATION OF JAPAN (1945-1952)

THE doctrine of military totalitarianism in pre-war Japan embodied the principle that education is an indispensable instrument of national policy: education, religion, and politics are inseparable, and the proper aim of education is the manifestation of the national entity. The formal system of education was a vital segment of an ingenious and comprehensive pattern by which the mind of the Japanese subject was moulded to fit the requirements of the state.

When the militarists succeeded in assuming control of the Japanese state after 1932, an ideal system of thought control was already an integral part of the machinery of government, for the Meiji leaders designed the modern system of education, with great care and insight, as an instrument of state policy. In accordance with the principles of an educational philosophy based on a unique fusion of Shinto, and other native traditions, with Buddhism and Confucianism, the people were taught what to think rather than how to think. The key to this system was absolute loyalty to the Emperor.

Consequently, this fundamental tool was within easy reach. It was so completely centralized and so easily manipulated that no major modifications were necessary. Down the long-accepted channels to Japan's obedient, loyal masses went the lessons of their military masters. The entire school programme was fully utilized as an effective instrument of thought control.

After April 1941 the exploitation of all subjects of study in elementary and secondary schools, for propaganda and indoctrination purposes, was intensified. The Ministry of Education issued an order requiring that the precepts of the famous Imperial Rescript on Education (the essence of Japan's philosophy of education) be reaffirmed, and that particular emphasis be placed upon the following principles:

(1) Education, in all fields, must cultivate the Way of the Empire and faith in the national constitution, and must inculcate the spirit of sincerity, obedience, and faithfulness.

(2) Education, in all fields, must make manifest the mission of the Empire in East Asia and the world and make subjects aware of their responsibility as people of the Empire, and cultivate the faith and practical ability necessary to assist the prosperity of the Imperial Throne.

Thus, even a brief analysis of pre-Occupation Japan shows the significant role of a highly centralized, religiously founded educational programme through which the people were bound firmly to the will of their military leaders.

What were the effects of crushing defeat, unconditional surrender, and the humiliation of military occupation after the years of privation and obedience? The Japanese people had been told to fight and they had fought bravely, even fanatically. They were told to surrender and they surrendered meekly. In fact, news of war developments had been so distorted by the government that the first realization of defeat came simultaneously with the announcement of capitulation.

In the early months of the Occupation, the general population was preoccupied with the immediate problems of food and shelter. Undoubtedly, morale was shattered; the people were stunned and bewildered. Confidence in the war-time leadership was destroyed. Japan was no longer invincible and the sacred land was to know the foot of a conqueror.

But the intricate pattern of political and social relations was not disrupted. The Allied Powers had promised that the Japanese were not to be destroyed as a people. The Emperor was in his palace. The government was manned by Japanese, and Tokyo was still the centre of authority. Though directives and orders were to emanate from a foreign, superior authority, they were to flow downward to the people through the customary channels.

Students of the subject will long be impressed by the ability of the Japanese to make the sudden transition from the high, emotional pitch of war to unconditional surrender. The landing of occupation troops was smooth and uneventful. The Japanese were disillusioned; cherished beliefs and ideals had been shattered and were yet unreplaced, but the weight of tradition had not been lifted. And while an era was closed, and the debris of war lay all about, the habits of obedience and respect for authority were not broken. Near the ruined factories, in the paddy-fields, the fishing-boats, and the rubble of the cities, they waited for the edicts of the conqueror.

Schools were locked. Many had been partially or totally destroyed. Teachers and pupils were scattered. But when the order went out from the Ministry of Education, nearly sixteen million students and four hundred thousand teachers assembled in the forty thousand usable schools, and in hundreds of improvised classrooms.

The Reform Programme: Decentralization

Critics of the Allied Occupation of Japan have charged: (1) that the ideology and institutions of democracy were forced upon the Japanese; (2) that they cannot understand democracy; (3) do not want it; (4) and cannot use it. Others have insisted: (1) that the Japanese responded to the teachings of democracy just as they would

have accepted, superficially, the orders of any supreme authority; (2) that they have made a 'fad' of democracy in their efforts to escape bitter memories of the recent past; (3) and that what has been accomplished can be easily undone as soon as a few clever and ambitious leaders get ready to do it.

In this brief study, it would be futile to attempt to analyse all these pointed criticisms. However, an effort will be made to outline the broad educational objectives of the Occupation, to discuss the efforts to free education from arbitrary control, and to examine the techniques and methods which were employed to establish education as the responsibility of the whole people.

One of the most difficult phases of the reform programme was that of utilizing the highly centralized Japanese Government as the chief agency of reform and yet, in the process, bringing about the decentralization of educational control and the diffusion of educational responsibility. The extent of decentralization can be most conveniently described by examining the re-distribution of controls over important aspects of the educational system.

The Aims of Education

Efforts to relegate the Imperial Rescript on Education (1890), and its influence, to a place outside the stream of education development and to supplant it with a new statement of aims and values, in law, illustrate a central point in the reform programme. The paramount aim, of course, was the development of an informed and alert public, jealous of its rights and conscious of its responsibilities in an emerging democratic society.

As guide-posts in this direction the new constitution, in force after May 3rd, 1947, guaranteed academic freedom, equal opportunity in education, and freedom from religious indoctrination by the state. The Fundamental Law of Education (passed by the Diet on March 31st, 1947) carried forward the provisions of the constitution by calling for nine rather than six years of free, compulsory education, by proscribing partisan political education and religious indoctrination in the public schools, and by declaring that education is the responsibility of the whole people.

Article 1 of the Fundamental Law of Education states that the purpose of education in Japan is:

> To aim at the full development of personality, striving for the rearing of the people, sound in mind and body, who shall love truth and justice, esteem individual values, respect labour, have a deep sense of responsibility, and be imbued with an independent spirit, as builders of a peaceful society and state.

The Organization and Administration of the Educational System

The school ladder consists of six years of elementary and three years of lower secondary education (the compulsory period), three

years of upper secondary, a standard four-year university programme, graduate and professional curricula.

Japanese schools are classified as government, public, and private. Government schools are established and operated by the national government; public schools are established and operated by prefectures, cities, towns, and villages. Except for those attached to government institutions of higher learning and those established by private bodies, schools of the compulsory-education period and upper secondary schools are of the public type.

Legal control of the educational system has been defined in a series of national laws. Powers are distributed among the Ministry of Education, prefectural boards of education, governors, and assemblies, and local boards of education, mayors, and assemblies.

While the Ministry of Education remains an important agency in national educational and cultural affairs, it functions within a prescribed sphere as part of a democratic, constitutional government. It is responsible for drafting and proposing legislation concerning education (minimum standards, curricula, courses of study, textbooks, national subsidies, etc.) and for rendering professional advice and assistance.

The Ministry has direct jurisdiction over government schools, while elected boards of education have direct jurisdiction over public schools. The Ministry also has limited jurisdiction over private universities, subject to a legal guarantee of autonomy and a requirement to consult the Private Universities Council prior to the exercise of its powers. Furthermore, the Ministry establishes national standards relating to private schools below the college level although the appropriate prefectural governor is the responsible authority.

Elected boards of education set policy and outline the general school programme, while the chief administrator is the superintendent of education who is appointed by and responsible to the board. It is particularly significant that the Ministry of Education is expressly forbidden, by law, to exercise control over the boards or over the schools under their jurisdiction. Early in 1953 there were more than ten thousand boards of education in Japan, but this number is being reduced by the consolidation of school districts.

The future development of education in Japan, for good or bad, will be closely related to the evolving role of the national Diet. If the Diet retains its constitutional integrity as an independent and representative body, through which the will of the people is expressed, it will be difficult for an ambitious Minister of Education, or his staff, to regain control of the school system. On the other hand, if the Diet reverts to its old role of subservience to the Cabinet and passes, uncritically, whatever educational legislation is placed before it, education could become once more the propaganda tool of a small, ruling clique. This is a two-way street. The development of genuine representative government in Japan must be

based on a rising educational level, and the educational system will reflect the effectiveness of representative government.

Obviously, constitutions, laws, and good intentions are not enough. A comprehensive effort was made to widen the range of public watchfulness over education by encouraging the growth and activity of a variety of national, regional, and local organizations, as well as professional and special-interest groups. The survival and development of a democratic system of education in Japan must be based on the initiative, the judgement, and the devotion of leaders who will insist that educational issues receive careful and intelligent consideration by the public.

School Curriculum and Textbooks

Since July 1948, substantial controls over the curriculum of the public schools have been in the hands of prefectural and local boards of education. Suggested curricula for elementary and secondary schools have been published by the Ministry of Education and, in general, are followed by most schools. However, there has been a considerable amount of local modification and adaptation. Occupation officials hoped that, within a short time, the Ministry would cease to compile courses of study and serve only in an advisory capacity to local educational personnel.

As in the case of school curricula, prior to the Occupation the Ministry of Education determined what textbooks would be used in the schools. Under the new programme, any person or group may compile a textbook manuscript and submit it to the Textbook Authorization and Research Council for review. This council examines the manuscript in the light of announced subject-field standards and approves or disapproves it for use in the schools. The approved lists are distributed to the boards of education, which have the authority to select specific texts for use in schools under their jurisdiction. In general, the boards have passed this responsibility on down to the individual schools or to special committees. As a result, in most subjects there is a wide and increasing range of choice.

Educational Personnel

Prior to the Occupation, educational personnel of the public school system were employees of the national government. Their loyalties were to the national authority rather than to the prefecture or the locality. Their instructions came from the Ministry of Education and their indoctrination was directed by the Ministry. Under the new programme, most teachers and other educational personnel are employees of prefectural and local boards of education within a system established by national laws. Furthermore, a modern civil-service system, both at the national and at lower levels, has been prescribed by law. Within this pattern, there has been tangible progress in improving teacher status, welfare, and professional standards.

Further Education

As in pre-war days, the national institutions of higher learning remain under the jurisdiction of the Minister of Education. However, the power of the Ministry has been limited by the guarantee of academic freedom in the new constitution, and by enhancing the responsibility and prestige of institutional presidents and faculties. The suggestion that national universities be placed under the jurisdiction of boards of trustees, representing the public interest, was not favoured by any influential group except, perhaps, certain private university officials, who advocated that government universities be abolished altogether.

Youth Organizations

Youth organizations and activities, which had been subjected to full exploitation and regimentation by the national government prior to the Occupation, have been placed outside the control of the Ministry of Education. A wider range of youth organizations has developed and stress has been placed on local initiative, leadership, and activity.

The Ministry of Education assists in the development of adult-education programmes, but its authority to control them is clearly limited by the Social Education Law (passed by the Diet on June 10th, 1949). Prefectural and local school boards, through their administrative offices, also give professional and technical assistance, but are legally forbidden to exercise control over the people and organizations engaged in adult-education activities. Programmes conducted in schools as part of curricular work, as well as the programmes of the other public institutions, fall under the appropriate governmental authority.

Thus, to an impressive degree, the present system of education in Japan is decentralized within a framework of law. At the same time there is ample room for national leadership, guidance, and assistance, as well as financial support. Whether or not national and local leadership, and the general population, will work together in sufficient harmony to make the new system work effectively (and to improve it) is a matter only the future can reveal.

Techniques and Methods

The Allied Powers did not establish a controlled environment in Japan. Instead, Occupation headquarters was superimposed upon a functioning totalitarian structure with the announced purpose of using the existing form of government in order to destroy the traditional pattern of social control. It was assumed that not far beneath the surface of Japan's social order there were to be found the roots of free society which could be nurtured and brought to flower.

This encouragement of democratic tendencies in education, as in

other fields, was guided by three underlying objectives. The first objective was to establish a free society under law with all the necessary political, social, and economic arrangements. Second, to encourage and assist the Japanese in acquiring the appropriate skills and understandings in the proper functioning of the new system. Third, to cultivate an appreciation of free institutions, representative government, civil liberties, importance of the individual, and other implications of democracy so firmly that it would be difficult, if not impossible, for a central authority to destroy them.

The application of these objectives was influenced by the recognition of two hard facts. One, the development of a democratic system of education, would be a complicated and long-range problem. Two, the duration of the Occupation was an unknown and uncertain factor.

From this mixture of certainty and uncertainty arose a critical question. Would there be time to establish a democratic system of education which could meet the requirements of the Allied Powers, and, at the same time, be appropriate to Japan's needs, acceptable to the Japanese people, and economically feasible?

The General Headquarters of the Supreme Commander for the Allied Powers attempted to face this question by establishing three guiding considerations. First, the framework of a democratic pattern of education must be established, in law, and in practice as soon as possible. Second, the power and influence of the Occupation, and the development and application of reform policy should constitute an educational experience in democratic processes, in so far as possible under a military occupation and within the limits set by the Japanese environment. Third, the Japanese should undertake to plan and implement the reformation themselves with " guidance and assistance " from Occupation officials and in so far as the general direction held to the main course outlined by the Allied Powers.

In the field of education, the responsible agency of the Occupation headquarters was the Education Division of the Civil Information and Education Section. For the greater part of the Occupation period, the head of the Division was a civilian and most of the members of the staff were professional educators recruited in the United States. The head of the section was military, as were the officials above him in the headquarters hierarchy. However, numerous critics of educational reform in Japan have failed to recognize that, for the most part, the Education Division was permitted and encouraged to approach its work in an atmosphere relatively free of military interference. This fact was understood by the Japanese and by members of the Division staff.

Even at the height of the reform programme, there were never more than thirty people filling professional education positions in the Education Division. There is perhaps no better illustration of the

intention of the Occupation that the reformation be brought about largely by the Japanese themselves. This small group was responsible for guiding the re-direction of a system of education which, in 1949, comprised more than forty-two thousand schools, almost nineteen million students and approximately six hundred and fifty thousand teachers, in addition to a large and tradition-laden Ministry of Education at the national level and forty-six prefectural offices of education. At least one education official was assigned to the military government teams in each prefecture for the purpose of guiding the implementation of the reform programme. There were a few others at intermediary levels but they had little direct contact with the Japanese.

The educational reform programme took shape as a consequence of the interaction of the Education Division and the Ministry of Education. Principal operational techniques used by the Division ranged from official directives and oral instructions to persuasion, suggestions, and hints. As the Occupation period progressed, the attitude of the Division, in keeping with Occupation policy, shifted from dictation to general supervision and finally to friendly counsel.

The Ministry was neither a passive tool nor a bureaucratic millstone. It was a collection of human beings who represented as wide a variety of opinions as did the members of the Education Division. Yet it, like the Division, was fully capable of making up its corporative mind. Its officials conducted themselves with dignity, with purpose, and with competence. It is not too much to say that the relationship between the two agencies was based on good faith and respect. The honest and devoted labours of Ministry representatives, and their contribution to the development of the new educational system, should not be overlooked because of a few isolated instances of wilful obstruction.

Because of the nature of the Occupation, most official, formal action was taken through the Ministry of Education. However, in the development of policy as well as in the application of the reform programme, the Division sought to stimulate the interest of the general public and to encourage the rise of educational leadership. Wherever appropriate, existing organizations were used. More often than not, new working groups were created.

For example, a large number of national, specialized councils were organized and established, either by law or government ordinance. While they report and recommend to the Ministry of Education, these councils are by no means mere creatures of the Japanese Government. In most cases they hold an important and influential place in educational affairs. At present there are councils concerned, for example, with the chartering of new universities, science encouragement, the Japanese language, curriculum, and other fields. In addition, there are many semi-governmental and non-governmental associations.

By far the most important educational group in Japan during the Occupation period was the Japanese Education Committee, later known as the Japanese Educational Reform Council, which was organized to advise the Japanese Government and the Supreme Commander on the formulation of educational-reform policy. Drawn from Japan's finest liberal leadership, the Council studied and made recommendations concerning practically every educational problem with which the reform programme was concerned. To a degree not yet fully realized, the present system of education in Japan owes its spirit and structure to the labours of this group.

A joint steering committee, composed of representatives of the Ministry of Education, the Education Division, and the Council, met weekly while the Council was in session. Through the steering committee the Council was kept informed of all official action in the field of education, broad lines of action were agreed upon, and differences were reconciled. In this way, the Education Division and the Ministry were prepared for the views and recommendations of the Council when they were submitted in formal reports. The steering committee was never used as an instrument for requiring that the Council submit only those recommendations which the Occupation desired. In fact, the Council was encouraged to conduct its deliberations in an atmosphere of complete freedom.

It is a significant fact that upon the withdrawal of the Occupation the Council was dissolved, only to be succeeded by the Central Education Council which, up to the present time, is apparently holding fast to the main lines of post-war development in Japanese education.

In addition to the face-to-face relations between officials of the Occupation and the Japanese people, a continued effort was made from the beginning to create opportunities for the exchange of educational ideas and experiences by bringing highly qualified representatives of Japan and the United States together. For example, in 1947 and 1948 there were visiting consultants representing, among others, such fields as vocational guidance and counselling, teacher training, educational finance, audio-visual education, women's organizations, the National Diet Library, and sociological surveys. An especially effective contribution was made by the Cultural Science Mission, composed of American scholars who worked for three months with their Japanese colleagues in the social sciences and humanities.

The most significant example of this type of relationship, in so far as the broad aspects of the reform programme were concerned, was the visit of the American Education Mission in April 1946. The Mission was composed of distinguished educators representative of different levels and types of educational activity, different parts of the country, and varying points of view.

The Report of the Education Mission was a product of the inter-

action of three principal groups: the Mission itself, the Japanese Education Committee (previously described), and the Education Division. The fact that the report, as such, was never adopted by the Occupation as an official statement of policy may have enhanced rather than detracted from its influence. It was respected, both by educators in the Occupation headquarters and among the Japanese, for its professional merit and for its inspirational content. This gave it a special quality which Occupation directives and government orders lacked. It would be difficult to exaggerate the far-reaching and constructive implications of this report. It was studied by individuals and groups throughout the country. Its ideas and suggestions can be found in the reports of the Japanese Education Reform Council, in the actions of the Education Division, in the education policy directive of the Far Eastern Commission, in the policies of the Ministry of Education and, most important of all, in Japan's present educational programme.

Another important method employed by the Education Division was that of arranging for Japanese students and educational personnel to go abroad for study and observation. Between 1948 and 1952, approximately two thousand students studied in foreign countries under private scholarships and under grants established by the U.S. Government. The Occupation also sponsored the National Leaders' Programme, through which hundreds of Japanese, many representing the field of education, visited the United States for from sixty to ninety days for study, observation, and conferences.

To supplement personal relationships and exchange there was a continued effort to import stimulating, professional materials for reference and study. This involved the importation of books and journals, the establishment of special libraries, the translation of materials into Japanese and their subsequent publication in magazines and in book form. Extensive use was also made of motion pictures, radio programmes, and recordings.

Efforts were also made to encourage and assist the Japanese in the preparation of their own materials. A significant example of this was the constant flow of professional books from the Ministry of Education between 1947 and 1952. These materials were prepared by individuals and committees for the Ministry of Education and with the assistance and advice of members of the Division staff and, whenever possible, of visiting consultants.

Beyond the problems of policy formulation and the preparation of the reform programme was the task of reaching educational personnel throughout the country. In view of the small size of the staff in Tokyo, the standard approach was through national and regional conferences and workshops with 'follow-up' sessions at the prefectural, *gun* (county), and city-town-village levels. During the period of the Occupation literally hundreds of these conferences were held. Most of them were arranged through the Ministry of

Education with Occupation staff members serving in an advisory capacity. Whenever appropriate, visiting consultants from the United States also participated.

Probably the most significant effort of this type, in the long-range sense, was the work of the Institute for Educational Leadership. Originally established in 1948 to provide a short, intensive course of study for potential superintendents of education and teacher consultants, the programme was broadened to include youth leaders, principals, university administrators and professors of education, curriculum specialists, and others. Between 1948 and 1952 there were eight sessions of the Institute, with courses ranging in length from three days to twelve weeks. Most were of the twelve-week type. Some of the more than nine thousand graduates of the Institute are now to be found in important and influential education positions in every prefecture in Japan.

The faculty of the Institute, at each session, was composed of American educators brought to Japan especially for this purpose, regular members of the Education Division, and a Japanese staff of approximately the same size.

The atmosphere established and maintained throughout the life of the Institute for Educational Leadership was friendly and professional. American and Japanese faculty members worked together as colleagues, not as victors and vanquished. Perhaps more than in any other joint Occupation–Japanese activity, attention was focused on the contributions of the Japanese faculty, while American teachers served as advisers and counsellors.

Conclusions

In this brief review, stress has been placed upon the efforts to establish a close relationship between the people of Japan and their educational system and upon some of the ways in which the reforms were brought about. In the long run, it is likely that these factors will be of much more significance than the details of reform. The educational efforts of the Occupation were not simply those of the military dictator. Rather, to an unexpected degree, they were the product of a unique and honest partnership dedicated to the pursuit of mutual goals.

A democratic system of education has been established within a pattern of law and institutions as an integral part of a larger framework of political and social organization. Many of the obstacles to the development of democratic tendencies have been eliminated or, at least, brought to public attention. There is evidence that the rank and file of teachers and administrators have faith in the new system and are trying diligently to make it work.

The Ministry of Education is functioning, by and large, within the limits of its new place in educational affairs. The school boards are operating. Many new organizations which were set up to assist

in the guidance and development of educational policy are holding steadfastly to the post-war programme.

For example, the Central Education Council, which replaced the Japanese Educational Reform Council of the Occupation period, declared in its first report that the new school system and the board of education system should be maintained firmly as defined by present laws and regulations.

Furthermore, the Council recently opposed the Minister of Education in his futile efforts to secure the passage in the Diet of a law which would have returned teachers in the public schools to their old status as national civil servants.

The Japanese Press has continuously criticized the current Minister of Education for his seeming efforts to enlarge the power of the Ministry over education. While sympathizing with the attempts of the Minister to minimize Communist activity among educational personnel, a large segment of the Press has not been convinced that national control of school teachers is a warranted solution.

The unleashing of democratic tendencies and forces has also permitted the development of selfish and misguided interests. For example, the Teachers' Union, strongly influenced by its Communist element, has worked on the principle that the schools belong to the teachers. One of the efforts of the union has been to gain control of education by winning places for its candidates, many of whom are former teachers, on prefectural and local school boards.

At another extreme, many school boards and many teachers and administrators still look to the Ministry of Education for instructions on matters which now fall within their own jurisdiction. It is here that we encounter again one of the most critical issues of all. There are those who hold that the Japanese people are not ready for the responsibilities of democracy and that their new freedom will be ignored or misused until strong leadership from the top will have to be reimposed in order to rescue them from chaos and confusion. There is still some feeling that the best leaders can be identified only by central authority and that representatives of the public interest should be appointed rather than elected. Now the people of Japan will have an opportunity to answer these charges in their own way.

In Japan to-day, the controls over education are not held by the central government or any single group. There is a lively competition of ideas and influences. In addition to the acute problems involved in the transition from a totalitarian to a democratic system of education, Japan is burdened with those grave issues which also confront wealthier nations, such as adequate financing, school plants and equipment, a sufficient number of trained teachers, better methods and materials. Certainly, the world will watch with sympathetic interest as the Japanese people try to work out solutions which are consistent with their national genius.

MARK T. ORR.

INCENTIVES

CHAPTER TWELVE

EDUCATIONAL INCENTIVES IN THE FIELD OF TECHNICAL ASSISTANCE

In discussing motivations, an economist often thinks in terms of material rewards, a psychologist of subjective conditioning, and a sociologist of the structure of the social situation. As a social anthropologist, I feel competent to consider only those incentives which are sociological. Here my general thesis is very simple. To nearly every technical-assistance project there is an educational aspect, in which the teacher or ' expert ', so-called, is an alien with a special kind of social status *vis-à-vis* those he is expected to teach. I propose to indicate certain of the general characteristics of this status, and to show how it may affect the capacity of ' experts ' to teach, and the willingness of learners to learn. Important in this thesis is the view that an essential, though usually unstated, objective in all TA [1] projects is the imposition of ' European ' [2] values upon ' Natives ',[3] whose reactions to the prospect of becoming second-class ' Europeans ' are, with good reason, markedly ambivalent.

The Imposition of Cultural Values

Widespread in the Western world to-day is the belief that, throughout the technologically backward areas of the world, a great and universal demand exists for more and better ' education '. Political speeches and reports in the Press, which encourage this belief, do not always make clear what is meant by ' education ', but imply that it is the moral duty of the more favourably placed

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[1] TA—Technical Assistance: the general body of operations of international agencies in so far as they affect ' under-developed territories'.

[2] ' European ': an individual who has been brought up to be accustomed to the cultural values and living standards of Western Europe. ' Europeans ' thus include not only actual Europeans, but also citizens of the United States, Canada, Australia, New Zealand, ' White ' South Africa, the ruling *élite* of South American republics and even, for that matter, Mr. Nehru, Prime Minister of India, educated at Harrow and the University of Cambridge.

[3] ' Native ': a citizen of Aidland [Aidland: a country in receipt of TA] who has *not* been brought up to accept the cultural values of ' Europeans ' as normal and commonplace.

Western nations, somehow to satisfy this demand. And, indeed, this is the ethical basis of the whole ETAP[1] conception.

Now, unquestionably, an almost universal demand does exist for schooling and technical education of the Western European type, but should its development be accepted as reasonable and normal? For education, in its widest sense, is nothing less than the means of passing on the whole of a culture from one generation to the next. European education belongs to European culture. Is the latter so obviously superior that Mexicans, Liberians, Arabs, Siamese, and the rest naturally want to turn themselves into ' Europeans '?

When questioned, most people equivocate. They do not claim for the European moral order unique superiority but argue that, since, undeniably, ' Europeans ' possess technological superiority, the advantages of this should be made generally available through TA education. No one, they claim, wants to disturb local national cultures in any other field except the purely technical. Can even politicians believe such facile arguments? Clearly the moral and technical aspects of education are not thus easily divided. To the anthropologist, a culture is a thing in itself whose component parts fit together and support each other. ' European ' industrial culture is neither better nor worse than the culture of Greenland Eskimos or New Guinea cannibals, but it is different. Bits and pieces cannot be taken from a ' European ' culture, grafted on to a ' Native ' culture, and the resultant composite be expected to flourish as an integrated system. How can the so-called backward peoples be educated in technology, or anything else for that matter, without having their society, as it exists, completely wrecked?

It is not simply a matter of incompatibilities, but rather that ' European ' education must, of necessity, *destroy* the existing order.

Many people, including professional educationists, often speak of education as something to be offered or withheld. Individuals are either educated or uneducated. And when an uneducated population is educated the result is all gain. But clearly, every society, no matter how ' backward ', has its own educational system. Formal schooling may not be included, but certainly training in the traditional techniques of the society and in the customary mores of the group is involved. Moreover, everywhere, the main periods for education are those of childhood and adolescence. The child who does not go to school spends his time learning things, though not of course the same things that he would learn at school. In short, any education is time-consuming. If, then, ' going to school ' is added to the traditional mode of training, something must be lost. Indeed, the school education is then in direct competition with the traditional informal education. The more successful the school, the

[1] ETAP—Expanded Technical Assistance Programme: the special body of projects financed by the specialized Agencies of the United Nations under this title.

more destructive it must be to the on-going continuity of the traditional culture. Further, wherever new schools are established in 'backward areas', they become a primary agency for increasing social tension by intensifying the natural latent hostility that always divides the members of successive generations. The school children do not know more than their elders, on the contrary, but they know entirely different things. The two groups belong to different cultures and the whole basis of group solidarity is radically disrupted.

Considered thus, why is 'more education' such a popular slogan, not only among educators but also among their potential victims? If the assertion that the breakdown of traditional values leads to 'intolerable oppositions between groups that threaten to destroy law, logic and convention'[5] is correct, why are the peoples of the under-developed areas everywhere rushing like lambs to the slaughter? That, basically, is my problem.

The Social Situation in Aidland

In any kind of TA programme the incentives and activities of four interested parties bear upon its success or failure. First, there is the government of Aidland, which initiates the request for assistance. Secondly, there is the International Agency, which provides the assistance as part of ETAP, or in some other way. Thirdly, there are the individual 'European experts' from the Agency. Finally, there is the general populace of Aidland; the people whom TA is intended to assist. Here I am mainly concerned with the first and last of these categories. I take the existence of the TA 'expert' and the circumstances of his appointment and briefing as a given factor in the situation; I consider him only in his Aidland context.

Within this context the incentives to action are aspects of the social values current in each particular Aidland. The various persons involved in a TA project, Aidland officials, Agency experts, Aidland counterparts[6] and Aidland general public, will react according to their particular positions in an elaborately structured situation. It is possible that even where all the parties concerned approve of educational procedures, their reasons for doing so may be very different. I propose now to generalize about these differences.

The first question is why do Aidland governments ask for TA at all? Theory and practice differ. Theoretically the initiative for TA springs from a request by an Aidland government, capable of assessing its own needs. In practice, each of the specialized Agencies engages in explaining to potential Aidland governments the advantages of seeking expert advice. The Agencies do not, of course, purposely misrepresent the merits of their 'commodities', but naturally tend to minimize, or even ignore, the social difficulties ultimately

[5] G. and M. Wilson, *The Analysis of Social Change* (1945), p. 133.
[6] The meaning of the term *counterpart* is explained below.

entailed. If these had been better understood by Aidland governments, a number of ETAP projects might never have been started at all. For most TA projects have revolutionary implications, and while governments may approve of progress, they are, mostly, distinctly scared of revolution.

As it is, most Aidland governments tend to look upon 'European' education as a free bonus; something added to the situation without detracting from its existing merits. There is, in almost all Aidlands, a school system of sorts, but it happens to be rather inefficient and only a small percentage of the available children go to school. The prospect of having the whole system enlarged and brought up-to-date under the supervision of a 'European' specialist of international repute is extremely attractive. No one stresses, or perhaps realizes, that formal education necessarily implies cultural loss as well as cultural gain. After all, a whole generation has to pass before it becomes fully apparent that educating 'Natives' to be 'Europeans' fails to educate them to be ordinary members of their own society.

Political Motives

But Aidland enthusiasm for European-style education cannot be explained away simply as a misunderstanding of what education implies. For one thing, the governing *élite* of most of these countries already belong to a cosmopolitan half-world of 'European' upbringing. These men, from their own experience, have few illusions about the cultural rootlessness that is the ultimate implication of 'more and better education' Why, then, being in power, do they so consistently give formal support to educational reform projects potentially so politically disruptive?

Their motives, I fancy, are seldom altruistic. 'Education' and TA, as slogans, have political value. In public, officials may express the most exaggerated enthusiasm for the United Nations and all its works, whilst privately they pour contempt on every aspect of TA. Of course, there are exceptions, but mostly a wide gulf exists between the public protestations of Aidland officials and the actual extent to which any particular official furthers the interests of TA. Once a request for aid has been initiated and the expert is on the spot, local government officials tend to lose interest. This basic cynicism is an important factor in a depressing situation.

Social Advancement

Yet even if the long-term implications of a 'European' education were fully appreciated by all concerned, the popular demand for it might remain unabated. For in most situations education is regarded as a means of social, rather than technical, advancement. The notion that 'Europeans' are privileged people (originated, of course, as an aspect of colonialism) still survives in most ex-colonial territories and has spread to countries which have never explicitly been

subject to European rule. 'European' culture has acquired a universal snob value. Learning to behave like a 'European' has become part of the technique of social climbing. 'European' education is valued as a badge of social esteem. Wherever the governing *élite* are 'European' in their style of life, formal education is likely to be popular whatever the practical utility, or otherwise, of its content.

One aspect of this attitude is that in most Aidlands, an education in the 'humanities' carries greater prestige than one in the 'sciences'. Though raising paradoxical difficulties for the advocates of TA, it is neither surprising nor irrational. It reflects a convention which even in Europe has been modified, and then but slowly, only during the last fifty years. The Aidland governing *élite* are drawn from two distinct social layers. At the top is a landowning group in which the individuals acquire their status by birth and assume, as a mark of aristocracy, a 'European' mode of life; below is a corps of government bureaucrats, who being recruited on a competitive basis need a 'European'-style education to qualify for office. Unquestionably, entry into government service is the principal mode of social climbing; and in the competition for entry, a qualification in the arts or law is more valuable than a similar qualification in science, with the possible exception of medicine. Science graduates are thought of as artisans; only arts graduates qualify as gentlemen. Ordinarily the status of technicians is low, while that of the impractical scholar, learned in such matters as theology and literature, is high.

Thus, while the response of local government officials to TA planning often appears a mass of inconsistencies, the social basis for these contradictions is clear. The kind of education now purveyed through the specialized agencies of the United Nations implies a scheme of values in which the qualified technician, and not the dilettante scholar, is the most expensive member of the entire social hierarchy. Such an inversion of values is revolutionary in the fullest sense of the word. Aidland officials find themselves in a quandary. Education is welcome, provided it is consistent with the existing social hierarchy, but a direct inversion of all the ordinary conventions of social intercourse is intolerable. Once the Aidland *élite* realize that a European technical education implies these social contradictions their attitude is bound to become ambivalent and inconsistent.

These, of course, are crude generalizations. Clearly great variation exists between one country and another: between one TA scheme and another. Further analysis is possible by considering different categories of TA education under separate heads.

Primary Education

In the field of TA the expression *Fundamental Education* has acquired a technical and highly controversial meaning, but I think in

the minds of all government officials and of nearly all educators, the fundamental of any educational programme is literacy. Yet the primacy accorded to the skills of reading and writing seems conventional rather than logical. Obviously *advanced* technical development calls for a general background of literacy, yet if the purpose of TA is regarded as simply the raising of general standards of living through limited technical improvements, are reading and writing crucially important?

Literacy Campaigns and the Incentive of Prestige

In Europe and America there is every justification for giving literacy priority. Almost the whole of the European cultural heritage is, in a sense, stored in books. Every child who can read has access to it. Not so in the many Aidlands, where there was no writing until the missionaries came, and where the entire national literature consists of school books and religious tracts. In any order of educational priorities, it should be recognized that the manual skills of a fitter-mechanic, carpenter, stone-mason, or even an electrician are no more difficult to learn than writing skills, and in themselves take no longer to acquire.

This kind of criticism is not restricted to those Aidlands which lack a literary tradition. The Asiatic countries with the highest literacy rates are far from being the most sophisticated technically. In China, where literature and technical ingenuity have both been highly developed over a long period, the technicians have mostly been illiterate, while the *literati* have mostly been technically incompetent.

It seems to me, on purely logical grounds, that there must be many Aidland situations where technical and mechanical training should be given priority over literacy training.

Yet the *demand* is for training in literacy. Whatever the objectives of TA educational planners, the actual recipients are not interested in technical knowledge as such but in literacy as the recognized channel for entry into the socially desirable 'white-collar jobs' It is no over-statement to say that in many Aidlands, technical and literacy training are regarded not as complementary, but as antithetical. The literate man is already 'too highly educated' to demean himself by acquiring the skills of a technician.

The demand for education in literacy is keen enough, but it reflects a search for prestige, not a thirst for knowledge.

Technical Education: Agricultural

Most TA activities in agriculture, including those of FAO, are commonly justified by such simplified arguments as:

(*a*) The population of Aidland is under-nourished. 'Europeans' are able to obtain higher yields per acre than 'Natives' using traditional techniques. 'Europeans' also eat a more varied and nutritious diet. There-

fore the adoption, by the general Aidland population, of European techniques and diet will mean an increase in the supply of food and the general raising of standards of living.

(*b*) Traditional Aidland agricultural methods are wasteful. They have led to deforestation, waste of valuable timber, desiccation and ultimately complete erosion and desert conditions. The aim of TA is to halt this vicious circle of deterioration and restore an economic balance to the system of land use.

It is symptomatic of such views that, as at 1952, of the ninety ETAP training fellowships awarded by FAO, twenty-seven were concerned with the conservation of land, water, and forests, twenty-one with nutrition, and fourteen with improvements in methods of cultivation, animal husbandry, and fishery. The order of priority indicated by these figures is significant. The desirability of conserving natural resources is clearly unquestioned by TA planners, but are they, perhaps, more dubious about the advisability of applying 'European' methods of farming in non-European conditions? Agriculturalists remember that, in recent times, the worst zones of man-made erosion have occurred not in Aidland, but in the centre of the United States of America!

Certainly in selected conditions, a 'European' farmer can get much more from his land than a 'Native' farmer, but the comparison is not strictly fair. The latter depends upon resources immediately available and not upon the prior existence of large-scale industry producing tractors, fuel oil, and synthetic fertilizers. Admittedly local self-sufficiency does, under high-population pressure, result in desiccation and erosion, but the alternative, the high yields and continuous land use associated with 'European' agriculture, is obtained only at the expense of the far-from-inexhaustible world store of coal and oil. If the less sophisticated peoples of the world are really to be induced to use 'European' methods, then, by implication, they must be fully incorporated into the world-wide Big-Business economy. The advantages of this are highly questionable. An agriculture dependent on the use of machines and manufactured fertilizers must produce cash crops to pay for these luxuries. Even where 'European' techniques result in higher all-round productivity, more foodstuffs will not necessarily be available for the local producer.

Such considerations have led to two schools of thought in TA agricultural education. One view, full-scale mechanization regardless of the social and economic consequences, was the basis for the now defunct Tanganyika ground-nut scheme. The justification for it seems to be that if the existing social system is to be shattered, the process may as well be thorough. Thus the Russians claim that modern technology implies that the land worker should have just the same kind of relationship to his work as the factory worker has to his. Food production should be organized like the production of motor-cars or aeroplanes. The other view, which seems generally to

prevail in FAO circles, is much more cautious. For the less sophisticated peoples relative economic isolation has advantages. TA may be able to provide better designs for locally made tools, better-quality seed, new technical procedures, new foodstuffs to improve the diet, but TA experts should not ordinarily recommend the use of machines which necessarily imply the ever-increasing dependence of the farmer upon urban industry.

The Incentive of Mechanization

How do local farmers in Aidland react to these diverse opinions among their advisers?

In the first place, the immediate attraction of labour-saving machinery is almost irresistible; to see a tractor ploughing a field makes other forms of cultivation seem clumsy and old-fashioned. Obviously, a farmer asked: 'Would you rather plough with oxen or with a tractor?', votes for the tractor every time. But communities which enthusiastically adopt some new mechanical device, sometimes suffer disillusionment in the light of experience. For machinery not only needs initial capital, it also requires continuous servicing in operation. The problem is not the mere *use* of new equipment, but its *maintenance*. Having acquired machinery, Aidland must start a school for training mechanics. Trained mechanics must be well paid or they will drift away to work more suitable for an 'educated man'. But if a mechanic is more highly paid than a clerk, a social revolution is started. These problems are not insoluble, but I know of no Aidland where they have as yet been effectively solved. Mechanization, then, provides its own initial incentives, but later leads to difficulties of organization.

Less spectacular types of agricultural reform present difficulties from the start. The local peasant farmer understands, in a way impossible for the 'European' TA expert, the merits of his own traditional techniques. Any change in his routine will upset the balance of work through the seasons and a mistake may easily prove disastrous. The farmer, conscious of the risks, cannot experiment with new-fangled and alien ideas. That the peasant farmer, in most parts of the world, shows himself to be staunchly conservative in his basic methods, is no mark of stupidity but is, rather, the wisdom of experience. Professional agriculturalists, therefore, seldom seek to impose a 'European' technique without long and careful experimentation under Aidland conditions. In my experience, the people who comment most freely on the 'inefficiency' of native agricultural methods are not the professional agriculturalists, but 'European' administrators and politicians who presume 'European' superiority without prior investigation or real technical knowledge.

The real difficulty here is that the political need to show quick results often prevents the professional adviser from carrying out the

basic preliminary research which is essential if agricultural reforms are to be viable in the long term.

Conservation

One special characteristic of agricultural reform schemes is that their implementation affects different sectors of the Aidland population in radically different ways. Thus soil conservation is always likely to be a popular theme with the higher echelons of Aidland government, but it may be quite the contrary lower down the social scale. A reform scheme, to be effective, will always involve infringement of the traditional rights of the individual in the interests of the wider state. The TA expert who advocates such reform may find himself regarded as the ruthless agent of a tyrannical government. To a government official it may seem reasonable enough to attempt to mitigate the evils of shifting cultivation by the establishment of forest reserves and regeneration areas from which human habitation is excluded, but to the general populace it may seem that, if land is eroded, it is because there is not enough of it, and that a government which allocates land to forest reserves makes matters worse, not better.

The difficulty is that so many of the technical matters upon which the TA expert is asked to give advice are local *political* issues. Reform implies not only educational training but the winning of political support, a shift, that is, in ' Native ' value judgements. Thus, to the ' European ', timber may represent a commercial asset; to the farmer, expendable fuel; to the ' European ', agricultural activities are a means of producing food; the farmer may regard them as a means of securing a wife. Doubtless in many parts of Africa erosion would be easier to control and the population would be better fed if each individual farmer kept fewer cattle of better quality. But how can the educator make this proposition sound attractive to a man whose whole scheme of values centres on having as *many* cattle as possible?

Agreement is possible, between TA experts and their public, on what are desirable ends, but less easily on means. Every Aidland has rival factions and competing interest groups. If the TA expert finds favour with one group he will certainly arouse the hostility of another.

Food-habit Incentives

Much the same applies to nutrition. The modern scientist can easily diagnose dietetic deficiencies, but the problem of inducing people to change their food habits is unsolved. Quite apart from religious prejudices, often very important, taste in food is a very strongly marked cultural peculiarity. (We like what we have been taught to like from our youth up: and be blowed to the nutritionist.) Under war-time rationing the English were said to be

nutritionally better fed than ever before; but not many people liked it! In many parts of Asia, well-to-do families invariably serve up on their tables highly polished white rice and despise the relatively grey and gritty hand-milled product which is the standard foodstuff of the labouring classes. The white rice is quite devoid of vitamins, and is virtually tasteless, but its nice appearance is sufficient to make it the esteemed food of rich and poor alike. The ordinary man's tastes in food are quite notably non-rational; educational nutritionists, it seems to me, have a pretty hopeless task.

To sum up this section: demonstrably much of the world's population is under-fed. How any substantial improvement can be effected *by using local resources alone* is far from clear. It is not merely a question of providing the right incentives, the agriculturalist must find the time and money for research into what can be done to bring about improvement. The specialists seem uncertain as to their long-term aims. Does improvement imply more food or more money? The introduction of rubber into Malaysia and cocoa into West Africa called for very little by way of education, but in both cases the local economy was revolutionized and the material standards of living substantially raised. Yet probably individual Malays and West Africans eat less, and worse, than before. Rubber is an easy crop to grow, but cannot be eaten! It seems likely that, left to himself and given the choice, the individual farmer will always opt for becoming fully involved in the general world economy; he will prefer to sell his crops for cash and buy his food elsewhere. From a world viewpoint the long-term need is not for more rubber, copra, cocoa, or cotton, but simply for more everyday food; yet in the short term, cash crops are often more profitable than food. Are TA advisers expected to take sides in this controversial issue of economic tendencies?

Technical Education: Industrial

Industrial development in the Western world has obviously involved an ever-increasing specialization of labour. To start up a modern factory, even on a small scale, requires technicians trained for dozens of *different* tasks. This degree of specialization presents difficulties for TA theory. New industries created under TA patronage must have, for prestige reasons, the very latest in technical equipment. But the Aidland technicians really do not need such refined apparatus. Conversely, men with the *general* technological experience needed in Aidlands are difficult to find in European industries. Too often TA ' experts ' know too much about too little. An example illustrates the problem. One of the foremen brought from Jugoslavia to Western Europe to learn the latest industrial methods, was trained in a French factory engaged solely in the manufacture of motor-car bodies. He pointed out that, while finding the training interesting, his job in his own country was not the

making of motor-car bodies but the making of whole cars!

The differences in conditions of work in Europe and in Aidland raise the whole problem of the value of sending industrial trainees overseas to Europe or the United States. The experience they gain has no relevance to the problems they face on returning home. Yet to Aidlanders, a man who has been overseas for training seems obviously better qualified than the mere mechanic who has learned his skills in some local general-purpose workshop. The high social status of the ' specialist ' creates this kind of problem everywhere.

Monetary Incentives

For most industrial labourers, the primary incentive is a monetary one. Yet in most Aidlands the ordinary countryman has, until recently, been living on a subsistence economy basis in which money has played only a small part. Most of his time and energy has been spent in producing food for his own consumption. If such a man changes into a factory labourer working for a money wage, his standards of living, though not necessarily raised, are given greater variety. New industries, however meagre the wages offered, never fail to draw off labour from the neighbouring rural areas, provided that in the latter money does not circulate freely. To this extent at least, the history of the European Industrial Revolution is being repeated again all over the world. Money and the existence of a free market is by itself an adequate incentive to gainful occupation.

Cottage Industries

Being conscious of this and of the unpleasant aspects of the Industrial Revolution, some TA administrators favour compromise forms of industrialization which may be designated ' Cottage Industries '

Such schemes are not new; Mr. Gandhi's well-known project for having a spinning-wheel in every Indian home is now a part of Indian political history. But the economic viability of such projects is always open to question. ' Cottage industries ' can survive only if they serve a market protected from the products of normal industry. The possibilities of this under Aidland conditions are very limited. Certain industrial products (yarn, earthenware, cloth, and so on) can be made without the complexities of full-scale industrialization. But no industrial organization can exist for long simply by consuming its own products. The products of ' cottage industry ' must have a market, and personally I fail to understand where it is likely to be found.

The whole ' cottage industry ' concept reflects a deep-rooted conflict in the minds of high-level TA planners. The outstanding characteristic of large-scale ' European ' industry has been the virtual elimination of individual handicraft. Since the basic assumption of TA is that higher standards of living depend on the

economic development of the 'under-developed' areas, TA clearly implies the ultimate destruction of native handicrafts and the substitution of factory mass-production. Paradoxically, TA sponsors 'cottage industry' schemes which purport to develop handicrafts in lieu of full-scale industry!

Increased productivity implies increasing consumption, the social consequences of which are liable to be even more drastic than those which follow directly from the reorganization of production. Some TA schemes imply quite radical changes of consumption patterns. In one South American country a fishing industry has been created from scratch: for a population which previously never consumed fish at all! Elsewhere in the same continent a TA expert reported that the conditions of semi-starvation in the hinterland could be resolved by using the surplus of bananas in the rest of the country. The technical-industrial solutions were simple and involved little more than building a drying plant and storage facilities. The trouble was that even semi-starving men, it seems, have little taste for dehydrated bananas. In a wholly rational world, men would be willing to consume just those things which their neighbours can most easily produce. Unfortunately, the world over, things which are easiest to procure are the least desirable.

Technical Education: Administrative

The *theory* behind TA attempts to improve the efficiency of administrative procedures in Aidland is quite clear and simple. The International Agencies provide the *expert*, while Aidland itself provides the *counterpart*. The expert imparts his special skills to his counterpart and then leaves Aidland. *The counterpart then continues to develop the good work which the expert has initiated.*

The practical difficulties of implementing this simple theory are many, not the least being that of recruiting experts with the right qualities as sympathetic teachers. Even if the problem of personality is solved, the social structure presents immense difficulties.

Social Status and Incentives

In the first place, the expert receives a salary similar to that commanded in the United States by a similar technician with first-class qualifications. As a result, in one South American republic, every ETAP expert received a higher salary than the president of the republic! The expert can afford the very highest local standards of living, he ranks as a member of the Aidland *élite*: hobnobbing with ministers and ambassadors. The counterpart, on the other hand, is paid the wage of a junior-grade government servant and lives with difficulty on the standards of a clerk. He is often a man of low social status, with ability and ambition. However well he learns the technicalities of his job he cannot wield the influence exercised by his predecessor.

Further, the counterpart often sees his job simply as a step in the promotion ladder. One TA expert I know spent eighteen months in Aidland establishing a system of man-power statistics; his counterpart, a man of intelligence, learned his task well and, just before leaving, my friend felt confident that his work would be carried on as planned. But to his consternation, the counterpart applied for (and obtained) a travelling fellowship from an altogether different ETAP agency! A post with the Ministry of Education was a better social proposition for the counterpart than running man-power statistics. The general point here is, that none of the various types of training project sponsored by TA have any real prospect of success unless the social standing of the qualified trainee is adequately rewarding. It is a symptom of this problem that Aidland governments, when allocating training grants, often require from the beneficiaries the most elaborate guarantees that, on completion of training, they will actually proceed with the job for which they have been trained. That this should be necessary seems to me highly significant.

Medical Education

Medical educators might seem to be on an easy wicket because of the spectacular success achieved by insecticide spraying and mass inoculation. Naturally everyone likes to be rid of malaria, venereal disease, hookworm, and the other endemic tropical diseases that have recently been brought under control. Doubtless, the short-term benefits of these prominent ETAP medical activities are enormous. Their long-term consequences (and those of the more traditional forms of sanitation) are very complicated.

Most Aidlands have maintained in the past a rough balance between a high birth-rate and a high death-rate. The introduction of modern methods of sanitation often reduces the death-rate quite dramatically with no corresponding decline in the birth-rate. On the contrary, the elimination of venereal diseases serves greatly to increase the effective fertility of the female population. Consequently, in many parts of the world, the population is now increasing at the rate of 3 per cent. per annum. Even if the most favourable prognostications of the agriculturalists were to prove correct, local food production could not keep pace for long with such a rapid rise in population. In a sense, the medical and agricultural aspects of ETAP are mutually contradictory.

The issues involved strike at the very root of ethics and morality. For a medical man, trained in the 'European' tradition, the saving of life is an absolute and paramount duty; yet if saving the life of a few increases the prospects of famine for the many, what then? There is little sign, as yet, that these issues are being faced by those best qualified to make decisions. The Indian government is so alarmed at the prospect that it has made birth-control a definite

objective of official policy; yet the WHO, a body which might be expected to advise upon birth-control methods for an illiterate rural population, has refused to discuss the subject at all. The issue, urgent and crucial, is well summed up by a doctor in charge of an Asiatic Aidland maternity centre, who said that since coming there the rate of still-births and maternal mortality had declined, but that the rate of deaths by neglect had rapidly increased. He did not know whether to judge the enterprise a success or just the contrary. While the educators themselves are uncertain as to what is good or right, one can hardly discuss the incentives of the potential pupils.

The other aspect of medical education calling for comment is the rivalry between 'European' and indigenous medicine. The doctors of the WHO (whether Indians, Mexicans, Syrians, or Englishmen) all have a 'European' conception of the role and nature of medicine. But of course there are other medical practitioners whom the 'European' professionals look upon as charlatans and crooks. In Europe, such is the pre-eminent social status of the medical profession, rival practitioners are virtually outside the law. Not so in other parts of the world. In India there are far more *Ayurvedic* than 'European' doctors. For many types of ailment, the general public has more faith in the 'Native magician' than in the cold-blooded 'European scientist' Once again the problem which presents itself to educationists is: "How far should we assume that Technical Assistance involves at every stage the imposition of 'European' ideology in replacement of traditionally based social values?"

Higher Education

At the university level, as in the lower levels of the educational system in Aidland, a 'respectable' education is in the humanities and in law. The bureaucracy is often recruited exclusively from arts graduates.

An example should serve to illustrate the difficulties experienced by educators. In one particular Aidland there were two so-called institutions of higher learning: a college of arts and a college of science. UNESCO rather rashly became involved in helping to improve the standards of the college of science. The Ruritanian circumstances of this country made the purely technical problems of establishing proper standards of scientific higher learning formidable, but the sociological issues were equally complex.

The heads of the two institutions were bitter personal enemies. The head of the college of science at first welcomed the UNESCO experts as a means of scoring off his rival. When it became clear that their presence served to show up his previous incompetence, his attitude changed to one of consistent and bitter opposition to his

[1] The whole topic is barred by the initial prejudices of the Catholic delegations.

UNESCO staff. The head of the college of arts felt insulted that his own superior institution had been ignored, and from the start took every opportunity to sabotage the well-meaning efforts of the international experts.

Conclusion

Most of my comments have centred round a single theme. In crude terms, the chief obstacle to the effective completion of ETAP projects is that the scale of values implicit in the whole conception of TA conflicts radically with that implicit in the existing social hierarchy of the various Aidlands. The problem of training technicians is that of making them respected. No doubt, if Aidland mechanics were paid twice as much as Aidland government clerks, all the able young men there would seek to become mechanics. But clearly an immensely powerful vested interest is standing in the way of any such drastic social revolution. In Aidland itself, the people in control of government finances have the strongest possible reasons for ensuring that technical and scientific occupations are *not* adequately rewarded.

Yet it would be a gross over-simplification to represent the problem of incentives as being concerned only with the wage structure of society. The scheme of values attached to monetary reward in the Western world is not common to all countries. The highest-paid jobs do not always attract the best men. It is rather that men seek posts which are a means to political power and personal esteem —but what is esteemed by ' Europeans ' may not be equally esteemed by ' Natives '. For ' Europeans ', Progress is a necessity: good in itself, and when Aidlanders respond enthusiastically to offers of TA, ' Europeans ' tend to assume that they are seeking ' Progress ' in its European sense. But the progress that Aidlanders seek is personal, not social. Aidland is still governed by individuals, not by bureaucratic cyphers. ' Europeans ' tend to approach the notion of TA altruistically: " What is best for Aidland?" The Aidlander viewpoint is more personal: " What can I, as an individual, get out of all this?"

So I return to my starting-point. TA education is always and inevitably a part of ' European ' culture; it is not, and cannot be, a part of Aidland ' Native ' culture. Those Aidlanders who seek to benefit from TA are the men who would like to break away from their own cultures and become ' European '. Whether they are wise or foolish to have this ambition is beside the point; it remains that ' European ' education is attractive to Aidlanders ***because*** it is ' European ', and because ' European ' behaviour patterns stand for all that is politically powerful and economically prosperous.

E. R. LEACH.

CHAPTER THIRTEEN

EDUCATIONAL INCENTIVES TO CITIZENSHIP AND PUBLIC MORALITY

THE discussion of educational incentives to citizenship and public morality under the caption of "Techniques and Methods" in an educational year book focused on induced cultural change is so laden with assumptions that attention should be given to them before proceeding further.

Can citizenship and public morality be taught, at least in the context of institutional education? Certainly, all individuals in the course of 'enculturation' learn the overt and covert values current in the society in which they live. Thus all morality, whether public or private, is an educational question. But it is an educational question only when learning and education are considered co-terminus.

If education is simply a method of achieving certain goals, e.g. inculcation of social values, can it be distinguished from propaganda or from proselytizing? The educational systems of totalitarian countries have demonstrated how effective such methods, consciously employed, can be. But the fundamental question lies primarily in the moral value attached to the goals. Education must therefore face squarely ethical considerations. Who wishes cultural changes? The teachers, the learners, or both? And what kinds are envisaged by each? Do they coincide? Are the changes desired in such realms as politics, economics, and techniques? One of the most difficult problems in all culture change and culture contact is that of incompatibility between the value systems of different societies. When such incompatibilities exist, the role of the teacher becomes infinitely more complicated and more delicate than when teachers operate within a relatively homogeneous social and ethical context.

How clearly can the process of change be foreseen? In other words, how clearly can the planners of Western society predict the process and direction of this latest phase of Western European cultural expansion? These questions must be considered rhetorical, for the social sciences and the accumulated wisdom of experienced practitioners are only at the stage of formulating the problem. They realize that change in one area of society may set off a chain reaction, but they are not yet able to predict its direction and intensity. To

ask these questions, however, indicates that there is no desire to discuss here educational incentives to citizenship and public morality within the context of ethnocentric prejudgments.

Incentives and Social Change

Incentives as " that which goads or incites to action " would seem to imply in institutional education predetermined goals and a moral consensus. It seems theoretically improbable that there can be consensus in either goals or morality among peoples whose social structure is undergoing change at a pace that outstrips a generation's conditioning. This situation is the basis of much contemporary *malaise* everywhere. Social changes occurring at a rate that requires an individual to rethink his relationships to society and to values every decade or two of his life are not conducive to group consensus. The fact that different facets of culture usually change at different rates intensifies the diversity of goals and moralities and creates, or allows to persist, mutually incompatible values.

Given such social conditions, the task of all education is to assist (and it can only assist) in the creation of noncompulsive, internally secure people who see the world objectively rather than through a haze of their own projected needs. It is from such personalities that constructive leadership at all levels of society must be drawn, if rapid social change is not to produce acute social dysphoria.

Motives

In this context it may be more constructive, therefore, to think of motives rather than incentives. The distinction implied is that motives are the needs and aspirations of individuals, whereas incentives imply the strictures of society.

In terms of motives, a clearer linkage between educational systems and public morality begins to emerge. The question now posed is: How does one assist an individual to realize his motives constructively in large and heterogeneous social aggregates? Again, there can be no pat answer. However, it does become clear that the educational task is to provide wider and wider channels into which individual aspirations and needs can flow. The individual can be taught, both intellectually and experientially, that wider and wider reference-groups are self-enhancing: to understand and to experience, for example, that his well-being and his neighbour's are linked, that they can gratify more wants within the context of a village, that the villagers in turn can secure more gratification within a province, and that the people of a province benefit from the cooperative relationships within a nation. The problem is one of extending ego-identification and thereby avoiding ' deculturation '.

There comes a crucial point in this process of expanding boundaries of personal identification. That point is where face-to-face, or potentially face-to-face, relationships are replaced by abstractly

structured relationships, where for tribal and community affiliations one must substitute nationality and citizenship. It would appear likely that a common human or humanized symbol, like the Great White Father or The Queen, may be effective as a transitional and emotional prop, although it can never have the permanence of a symbol that is only shorthand for experiential and emotional identification. The teacher's most difficult task in expanding the horizons of identification is diagnosing in each student the point where alienation threatens. Individuals will vary vastly in their capacity constructively to integrate conflicting values and past conditioning into new environments. Students should not be removed from their social matrix until it is certain that alternative social matrices are available to them, or that they will be able to return to their own social matrix without alienation or deviance destructive to the self or the social group.

To put the same proposition differently, a formal educational system must strive to link rather than dichotomize the values and life opportunities of pupils. A child faced with a valuational dichotomy representing home and school will be faced with choice and the attendant tensions. These are not of themselves undesirable, but when the gap between resources and aspirations cannot be closed, because appropriate social instruments are not available, tensions may become psychologically intolerable. The individual may then employ any one of several defence mechanisms. He may collapse into depression, inertia, and defeat; he may seek escapes such as alcoholism; or he may throw himself into political or religious nativistic movements that retard and disrupt rather than hasten social equilibrium. Boarding schools that remove the child from his home environment, by dramatically dichotomizing his world, appear to be particularly baneful. If the apposition rather than the opposition of cultures is the goal of formal education, the desirability of local day schools is clear. But the practical problems of costs, standards, and staffing are serious. Speed must be sacrificed. Nevertheless, certain tribal or folk leaders are the first to urge a speedy social transformation through education. To them, gradualism is seen as a niggardly policy that withholds the benefits and rewards available to other segments of the population.

Leadership and Aspirations

We all are familiar with students whose aspirations for a 'prestige' education are irrelevant to their life chances. Such aspirations too often reflect the differential reward systems of plural societies. A future Ceylonese educational leader need not necessarily achieve personal gratification and social effectiveness through the British classical education to which he aspires. The basic educational task in such situations is to recognize early those individuals who will be leaders in acculturation and give them the best possible training in

the problems they will face on both a personal and a social level. As Mead has indicated, the goal of their education should be to produce bi-cultural, not deculturalized, individuals. Such persons should have: (1) " ability to speak, read, and write some 'world language'," (2) " a grasp of . . . Western economy," (3) " a modicum of cross-cultural sophistication," (4) a state of mind that can be roughly summarized as scientific, (5) a sense of history that makes possible dealing with time perspectives, and (6) sufficient independence from his own culture to be able to live " outside of it without crippling nostalgia ".[1] To this list should be added social opportunities and rewards commensurate with the acquisition of such skills. Although such individuals will be relatively rare, and cannot be the determinants of a broadly based educational system, they can exercise great influence upon their social milieu. A 'gradualist' policy based on linkage and incorporation has serious additional responsibilities in recognizing such individuals and in providing them with special educational facilities.

So far, the argument has been greatly simplified because it has been phrased in terms of individual and institutional education. In fact, the individual's education will occur on many fronts, and some of them more deeply emotional and personal than can ever be provided by a school system.

As has been implied, all education occurs within a social context, and what constitutes public morality similarly belongs there. Failure to learn is too often failure to accept values and symbols whose relevance cannot be perceived. Therefore, except for the deviants referred to above, education for citizenship and public morality in the Western sense can go no faster than the change of the whole social structure. It is inevitable, as we have said, that the individual in a changing society will be faced with value choices. To an internally secure person this is enhancing rather than diminishing only in so far as, his needs and expectations being legitimate, he finds life situations that are consonant with them. If he is asked to be a citizen of a country, he must not find that the gates are closed by ethnic, economic, or other prejudices and discriminations. Or, if the individual remains with his original community, he should find there opportunities to live a self-respecting existence. If people are expected to be 'good citizens', identified with public morality, then those failures and frustrations that it is everybody's lot to encounter should not be referable to demonstrable inequities in the social structure of the nation.

Conclusion

The essential answer, then, to the question of good citizenship and public morality is that these are conditions to be achieved and

[1] Margaret Mead, " Professional Problems of Education in Dependent Countries," in *Journal of Negro Education*, Vol. 15, No. 3 (1946), p. 347.

not strictures that can be directly taught. They will be achieved on a broad base to the extent that social changes are not too rapid, that the channels to widening identifications are made apparent and accessible, and that social inequities do not frustrate legitimate aspirations. Good citizenship and public morality are end-products of an integrated society.

In stable societies a consensus on values may permit the direct inculcation of moral behaviour. In rapidly changing societies, the task of education is less to inculcate abstract social values than to strengthen the individual's internal security and self-esteem and to direct legitimate aspirations into realistic and immediate gratifying channels of adjustment and action.

CORA DU BOIS.

SECTION V

THE AGENCIES OF ADMINISTRATION

AMONG the major agencies of technological transmission which have operated in some form or other down through the centuries are found: cultural borrowing by direct-contact with one's neighbour; war and conquest; trade, commerce and industry; and the churches, missions and philanthropic foundations. To these have been added in modern times national and international organizations. All of them operate to-day. Yet the considerable and growing efforts of national governments to utilize the techniques of the West is recognized. Social and economic developments are freely pursued by peoples desirous of establishing themselves as free and independent; themselves fully in charge of their economic and educational policies. Under *Local and National Efforts* only a selection of these nationally administered plans can be described. They are of early reforms and present development in Middle Eastern countries, development in India and in Brazil. In other parts of this section the assistance given—and its educational implications—through the various agencies is recorded: *The Churches and Missions; Private and Commercial Agencies;* and *National and International Organizations.* Whilst there is no account of the work of such Foundations as the Rockefeller, Guggenheim, Kellogg, Carnegie, and Ford, the importance of their role in education is fully appreciated. Their activities have, however, been fully documented elsewhere. Nor is there an account of the influence of pioneer airlines, modifying as they have the cultural patterns and economies of previously untapped regions. The safety record, based upon the meticulous servicing of a trained Peruvian staff, of the Fawcett Airlines—originally flying the rugged Andes in aircraft of local design and construction—has made this local line famous. Panair do Brasil has mushroomed from a tiny coastal airline to one of major importance. The training of its large and skilled all-Brazilian staff is an educational achievement of private technical assistance of the first order. Similarly, the success of the Arabian American Oil Company's training programme described in this section is one of the miracles of modern technological development. The company had to train the operating and maintenance personnel for what was to become the world's largest oil company, drawing most of its potential employees from illiterate nomadic tribesmen. In case studies in the final subsection the assistance provided through a selected number of national and international agencies is outlined.—THE EDITORS.

LOCAL AND NATIONAL EFFORTS

CHAPTER ONE

EARLY EDUCATIONAL REFORMS BY MIDDLE EASTERN GOVERNMENTS

SOME years ago Abdarrahman Azzam Pasha, then Secretary of the Arab League, protested in a speech against the general tendency to regard the Arab countries as backward, and remarked: " We are not reactionaries and we are not backward. Even if we are ignorant, the difference between ignorance and knowledge is ten years in school."

The idea was not new. About a century and a half earlier Halet Efendi, Ottoman Ambassador to France under the Consulate, wrote a series of dispatches decrying Western civilization, which, he said, was so over-praised by foolish Turks. All that was needed to achieve the same results was to establish five factories for snuff, paper, crystal, broadcloth, and porcelain—since the manufactures of Europe consisted principally of these five articles—and also a school for languages and geography " If these things were established, then after a period of five years, said Halet, Turkey would have achieved equality with Europe and would have no further need of her.

Military and Naval Schools

It is curious that after nearly one hundred and fifty years these few years of schooling are still needed. It was not for lack of efforts, which, when Halet wrote, had already begun. During the eighteenth century the military defeats suffered by Ottoman arms had imposed on Ottoman governments the need to improve the training and equipment of their armed forces. In 1734 a European-style school of military engineering was opened with the assistance of a Frenchman called De Bonneval, known after his conversion to Islam as Ahmed Pasha. This was closed after a while as a result of bitter opposition from the Janissaries, who resented such new-fangled' notions and methods. A second attempt was made in 1773, when a school of mathematics was opened, primarily intended for the navy. A number of surviving pupils of the earlier school were transferred to it. The school was organized with the assistance of the Baron de Tott, a Western artillery officer. We have a detailed description of it by the Venetian priest Toderini, who found it well equipped with European maps and appliances and with a library of European textbooks, for some of which manuscript Turkish translations were

available. The teacher, says Toderini, was an Algerian, who as well as Arabic and Turkish, knew English, French, and Italian; he was well read in European books and expert in navigation and the use of navigational instruments. In October 1784 a new training course for army engineers was instituted with two French engineer officers as instructors, working through Armenian interpreters.

From 1792 Selim III, the first of the great reforming Sultans, carried through a large-scale extension of these schools and established new military and naval training centres with French assistance, as well as a printing-press to produce modern textbooks for them in Turkish. We have a somewhat unfavourable description of the mathematics school from the English traveller W. G. Browne, who visited Constantinople in the 1790's:

> The Turks are remarkable for half-measures. In the mathematical school (Muhendis khan), a substantial and commodious building, they are furnished with everything—except instruments and books; the class small or none; but the end of the institution is considered as completely answered, as there are professors who meet and smoke their pipes together.
>
> The appointment of professors, or teachers, is made entirely through interest; not in consequence of superiority of talents or acquired knowledge. Nor is the selection of scholars more judiciously conducted. For as literary qualifications are far from securing advancement, and the acquirements of study terminate in the solitary satisfaction of the student; few or no persons in easy circumstances, devote their children to the pursuits of science. When therefore it was in agitation to form a corps of engineers, the *élèves* received into the school, chiefly consisted of Macedonian and other foreign subjects, who scarcely understood the colloquial Turkish, much less the terms of art in any language. At this time, instead of collecting young men whose families are any way distinguished, whose examples might be of importance, and whose name would confer a certain degree of credit on the institution, vagrants are taken from the streets, to each of whom ten piasters yearly are allowed, during their studentship, with one suit of apparel, rarely or in no instance renewed. No lodging is provided for them, and they naturally return to their accustomed quarters in the exterior of the baths and bakehouses, during the night; where the company they habitually meet, and the conduct which they necessarily adopt, certainly cannot contribute to their mental improvement.[1]

The reactionary movement of 1807 brought a temporary setback to these reforms and resulted in the closure of this school. The reforms were, however, resumed and extended during the nineteenth century by the Sultan Mahmud II and his successors.

From the first, considerable importance was attached by the Turkish reformers to education, which they saw to be essential if they were to have the personnel capable of carrying through other reforms. In 1845 a State Council was appointed to devise and apply educational reforms. In the same year decrees were issued for the establishment of a secular university and of primary and

[1] W. G. Browne, *Travels in Africa, Egypt, and Syria. From the year 1792 to 1798* (London, 1806), pp. 504–5.

secondary schools. These were to supplement the Mosque-schools and theological seminaries which hitherto had been the main centres of education in most of the empire. These proposals, as one might expect, encountered very vigorous opposition from the religious hierarchy, and real action for putting the decrees into effect was very slow. In 1847 a Ministry of Public Instruction was formed to establish and superintend the new schools.

Modern Education at the Secondary Level

Certainly the most important of these new schools was the Lycée of Galata Saray, which was opened in 1868. In this school the language of instruction was French (except for purely Turkish subjects), and a serious attempt was made to give a modern and Western curriculum of secondary education. Such schools existed, of course, under the auspices of various foreign missions, but Galata Saray was the first serious attempt of a Middle Eastern government to provide modern education at secondary level in a Western language.

It is difficult to exaggerate the influence of the Galata Saray school in the rise of modern Turkey. As the need for administrators, diplomats, and others with a Western education and a capacity to handle Western administrative apparatus became more and more pressing, the graduates of Galata Saray came to play a preponderant role in the politics and administration of the Ottoman empire and, after it, of the Turkish republic.

By the end of the nineteenth century there was already a considerable network of primary and secondary schools all over the empire. These were of two kinds, one civil and one military, the original purpose of the two groups being to provide bureaucrats and officers.

During the same period a parallel development took place in Egypt, where an autonomous regime under Muhammad Ali and his successors was established. There, too, the new school system was military in its original conception and was for long determined by the needs of the armed forces.

The efforts made by the Ottoman authorities had a very much greater effect than is generally admitted by Western writers. Thus George Antonius in his account of the Arab awakening greatly overstates the importance of Western—chiefly French and American—educational efforts in the Arab lands in the nineteenth century. Certainly the influence of the French and American schools was very great and played an important part in the revival of the Arab peoples. But on the whole its influence was considerably less than that of the new-style primary and secondary schools established in the course of the nineteenth century by successive Ottoman reforming ministries. Through these Ottoman schools Western influence was transmitted to the Arabs in an adapted and therefore more easily assimilable form. Far more Arabs in Ottoman Syria and

Iraq received a Turkish education than received Western education, right down to the end of Ottoman rule in 1918. The Turkish influence on modern Arab thought and letters can be seen very clearly in the scientific and political vocabulary of modern Arabic, in which most of the neologisms coined to describe new things and ideas coming from Europe, though etymologically Arabic, were first used by Turks in Istambul. It will be remembered that the Turks used Arabic as a learned language, in the same way as we use Latin and Greek; though most of the new words in nineteenth-century Turkish for politics, economics, science, etc., were made from Arabic roots, it was through Turkish that they passed to Arabic usage. In modern Arabic they are Arabic words in the same sense that ‘ telegram ’ and ‘ telephone ’ are Greek words in modern Greek.

The Extent of Schooling

The whole school movement in the nineteenth century was, however, limited; first in numbers, since it never affected more than a very small proportion of the town population and hardly touched the rural masses. It was even limited in the effect it had on those who received education in the new-style schools. As we have seen, the educational reforms were in their inception purely military and originated not in any desire to accept Western civilization or indeed in any understanding of Western civilization, but entirely in the desire for an army and navy capable of handling Western weapons and equipment and of meeting Western enemies on equal terms. Hence the concentration on military subjects. The early schools were entirely military: even the first medical schools began as training centres for the army medical corps. Likewise the first language schools had as their purpose to form people able to translate military textbooks into Turkish and Arabic and to serve as interpreters to foreign experts. But with the military sciences came such ancillary sciences as engineering, mathematics, and the like. Printing-presses were established at Constantinople and Cairo, which, though they at first printed only military textbooks, gradually extended their activities to other related fields.

The methods of instruction in these schools were taken over with little change from the early Muslim schools and seminaries. The material of instruction was the text and commentary, deriving their authority from tradition via the author and the teacher, and being learnt by heart. The treatise in castrametation of Jean de Lafitte-Clavé, which was printed in a Turkish translation in 1787, was studied and memorized in the same way as the holy writings of earlier schools. A science was still conceived as a collection of separate pieces of knowledge which the learner had to acquire one by one and store in his memory. There was no argument or discussion, no attempt to develop a critical spirit of free inquiry.

Later in the nineteenth century increased efforts were made in

non-military education, which resulted in the emergence of a new educated class with a new type of education. The traditional Islamic society had had a tripartite ruling class:

(1) A religious hierarchy consisting of the theologians and the doctors of the Holy Law, whose education was based on Koran and tradition, theology and jurisprudence. Since the only law admitted by Islam was the God-given Holy Law promulgated by revelation, jurisprudence belonged amongst the religious sciences, and the only lawyers were those who belonged to the religious hierarchy.

(2) The bureaucratic hierarchy—the civilian officials who administered the empire. The traditional matter of their education was polite literature, consisting of history, essays, poetry, and other branches of literature, in the three classical languages, Arabic, Persian, and Turkish. While Arabic was the language of the juristic and theological sciences everywhere, polite literature outside the Arab countries was mainly cultivated in Persian and Turkish.

(3) The officers of the armed forces, whose basic education in earlier times had consisted of war and hunting: supplemented in the Ottoman state by a grounding in the polite and the religious literatures.

The religious hierarchy remained strongly conservative, opposing all educational reform. Some attempts were made in Egypt to reform the great Muslim seminary of Al-Azhar, for long the intellectual centre of orthodox Islam. In 1872 an examination and diploma system was introduced and modified several times in succeeding years. But it was only in 1911 that a serious attempt was made to reform and modernize the curriculum by introducing Western languages and science subjects. Even so, the changes were limited in their effects. In Turkey the reform of the seminaries came still later and took a more radical form, when the republican government closed the seminaries altogether and created a faculty of theology in the University of Istambul in the hope—which was not fulfilled—that as a part of a modern and secular university the teachers of the Holy Law and the theologians would have a better chance of modernizing the content and manner of their instruction.

Social Effects

The first of these three groups to undergo a really important educational reform was, as we have seen, the military. They have therefore been for some time the most Westernized element in most Middle Eastern countries. Hence the common Middle Eastern phenomena, somewhat rare in other parts of the world, of the regular army officer as the vanguard of change and progress.

The first change in the education of the civilian bureaucrats came at the end of the eighteenth century, when Selim III, as part of his reforms, established regular Ottoman diplomatic missions abroad. He was the first Ottoman sultan to do so. Young men were needed

to staff these embassies, and before very long the administration reforms within the empire required the creation of a European-style civil service. At the same time legal and constitutional reform in several Middle Eastern countries brought into existence two new elements: secular lawyers and politicians. These people required and received a new polite and professional education in place of the old one, in which the basic subjects were Western languages and law: both of them new. Later they were supplemented by economics and commerce. All these subjects were new to Middle Eastern curricula. They were, however, familiar in that they were all literary in form, capable of being learnt from books and by word of mouth and memorized. They could thus be assimilated to traditional notions and methods of education relying chiefly on authority and memory. The Middle East had no tradition of practical science—and the once great Muslim tradition of scientific inquiry and investigation had long since been stifled by authority. No less serious an impediment was the deep-rooted social attitude to power, status, and work that still makes the Turk or Arab a bold and resourceful driver but an unwilling and incompetent mechanic.

The general effect by the end of the nineteenth century was therefore limited—and it was still necessary for each generation to go to Europe or study under European teachers, since modern education in the Middle East was not sufficiently acclimatized to grow or even to maintain itself. The general picture was one of results without process, conclusions without reasoning, grafts without roots, taps without plumbing.

B. LEWIS.

CHAPTER TWO

WESTERN TECHNOLOGY AND THE ARAB WORLD

THE challenge of Western technology was faced at the turn of the eighteenth century by the Ottoman Empire which then included all the independent states now forming the Arab League. To survive on the battle-field in the face of European technological superiority it was found necessary to turn to education, and thus the modern Ottoman school system was born of military necessity.[1] Foreign instructors were engaged, students sent to European institutions, and science, mathematics, and foreign languages were introduced into the curriculum. But even such small-scale Westernization met with strong resistance, and its progress was painfully slow.

In semi-independent Egypt, however, the movement of Westernization made a promising start during the first half of the nineteenth century under the leadership of its viceroy, Muhammad Ali, who, with Western material and personnel, effected revolutionary changes in agriculture, industry, and education. His ambitions were, however, thwarted by the intervention of the major European powers, and the Egyptian reforms were gradually wrecked through foreign obstruction.[2]

But these two attempts to adopt Western technology through the agency of education proved abortive also because they were designed primarily to further the interests of the rulers, not the ruled. Both attempts lacked the material incentive for individual effort, and the ideological appeal for national endeavour.

Before the end of the nineteenth century, Egypt passed under British control, and during the second decade of this century British administrations were established in Iraq, Transjordan, and Palestine, and French in Syria and Lebanon. The past hundred years witnessed a continuous struggle of the peoples of these countries, practically all Arabs by race and largely Muslims by religion with strong Christian minorities, to achieve national independence. With the exception of Palestine west of the River Jordan this goal has now

[1] Cf. Sati' Husri, *Arab Cultural Annual*, I, pp. 4–5 (issued under the auspices of the Cultural Department of the Arab Leagues, Cairo, 1949). (In Arabic.)

[2] Cf. Charles Issawi, *Egypt: An Economic and Social Analysis*, p. 16 (issued under the auspices of the Royal Institute of International Affairs, 1947); *Proceedings of the Academy of Political Science* (Columbia University, New York), Vol. XXIV, January, 1952, p. 31.

been reached. Achievement of national independence is not, however, an end of the struggle. The new national governments found themselves faced with immense economic and social problems, on the successful handling of which now depends not only the preservation of their independence but their future development as civilized communities.

Western tutelage contributed a great deal to the awakening of the Arab world, but for a variety of reasons fell short of the needs of a revival to make up for centuries of stagnation. Thus when national governments took over in Egypt, Iraq, Syria, and Lebanon, for example, the majority of their peoples were still suffering from abject poverty, crippling illiteracy, and other social and economic disabilities. Western administrations effected social improvements everywhere, but nevertheless the Near East [3] society was left far behind other countries with similar natural resources but with superior educational facilities and technical advance. Political conflicts between Western administrations and the indigenous populations prejudiced the chances of comparative stability, an important prerequisite for long-range plans of social development. Thus far more attention was paid to political questions than to raising the material and intellectual standards of living. Remarkably few official papers were published by any Western administration in the Near East on education, agriculture, and health compared with the vast number dealing with bloody disturbances, fruitless negotiations, political conferences, and the like.

But missed opportunities, retarding to progress though they were, proved incentives; association with the West taught the Arab countries valuable lessons. Although they shun political domination, they are now more than ever eager to use Western techniques to accelerate the rate of advance of their countries towards prosperity and civilization. For the West can bring to the Arabs not only the fruits of a civilization originally borrowed from the Near East,[4] but also its own modern contribution in the form of science and technology: the use of science and machinery to increase the productivity of the soil, to extract and utilize mineral resources, to provide hygienic conditions at home, on farm, and in factory, to convey agricultural produce and manufactured goods quickly and cheaply, and scores of other services. It is widely recognized in the Arab world at present that full development of its natural resources requires the use of Western methods, tools, and skills.

The purpose of this essay is to try to see how far the Arab countries have been able to achieve this object since their national eman-

[3] 'Near East' is here preferable to 'Middle East', since the latter is now taken to include, among other countries outside the purview of the present study, Turkey and Persia.

[4] Charles Malik, "The Near East: The Search for Truth" in *Foreign Affairs* (January, 1952), pp. 231 *et seq.*

cipation from Ottoman, British, and French domination.[5] Let us then turn to some of their schemes of development now in actual operation and indicate the role of education, widely conceived, in furthering them. For in the application of science, in technical and mechanical skills, national governments are fully alive to the efficacy of education in their schemes.

Iraq

Perhaps the best example of an Arab country which has worked out and now operates a balanced programme of development is Iraq. The country has an abundance of fertile soil and river water which together can produce, as they did in the past, wealth and prosperity and support a much larger population.[6] Its rich oil resources are now well exploited and yield adequate capital[7] for agricultural, industrial, and social development. But agriculture is still the greatest source of national income, in that the great majority of the population live on the produce of the soil. Any industrial development must therefore be subordinate, for some time to come, to agricultural development, or carried on in conjunction with it and not, at any rate to its detriment. Experience of other countries has demonstrated that co-ordination of development requires long-range and careful planning. Accordingly the Government of Iraq created in 1950 the Development Board[8] and diverted to it 70 per cent. of the oil revenue.

Under a Five-Year Plan and with a budget of one hundred and fifty-five million *dinars*,[9] the Board is now putting into effect its programme, which includes, over and above major irrigation, reclamation, and settlement projects, two million pounds on agricultural research, five and a half million pounds on school expansion, and two million pounds on housing. The main difficulty of the Board was soon found to be not shortage of capital but shortage of " administrators, technicians, skilled workers, and semi-skilled labour ".[10] The present purely abstract content of the curriculum

[5] The following pages are restricted to considering what development was and is being undertaken in certain state members of the Arab League since the end of the Second World War, or more particularly during the last three years.

[6] Total area is 168,400 square miles; total population around 5,000,000.

[7] Iraq's income from oil in the year ended March, 1953, was £34 million (*The Times*, April 15th, 1953). (Press references, other than those in Arabic, are derived from the collection of the Press Library of the Royal Institute of International Affairs.)

[8] Composition of the Board: two *ex-officio* members (the Prime Minister and the Minister of Finance); six executive members appointed by Royal decree to hold office for five years, two of whom are foreign experts: a British financial expert and an American expert on irrigation. The Board has since been converted into the ' Ministry of Development '.

[9] The Iraqi *dinar* = $2.80 = £1.

[10] *United Nations Review of the Economic Conditions in the Middle East, 1951-2* (New York, 1953), p. 6.

in schools is probably responsible for the dislike of manual labour by those who emerge from the secondary schools. But the authorities are trying—and appear to be succeeding—to overcome at least some of these difficulties. Quite apart from an attempt—still no more than an attempt—to give a rural bias to state village schools and a determination to develop a vocational side in secondary schools (features which are now common to all educational thinking and planning in Arab countries), Iraq is expanding its higher education to provide the needs of its development plans.

Obviously such intentions cannot be carried out overnight, and the shortage of semi-skilled labour cannot be completely met without universal literacy and other social advances. Any appreciable increase in the number of skilled executive workers must similarly depend on the reform in and expansion of agricultural and technical instruction in secondary schools. However, semi-skilled labour and skilled workers receive at present more on-the-job training than they probably do in formal educational institutions. Such training, the value of which must be neither under-estimated nor despised, is being received both in state enterprises and in the workshops of the oil companies, although it is all on a small scale. In the field of higher education—training of managers and experts—Iraq, however, seems to be nearer to overcoming the shortage of technical personnel.

In its annual report for 1952 published in Arabic the Development Board states that it sent a mission to Europe to recruit engineers and technicians and succeeded in engaging eighteen from Britain, Belgium, Holland, and Switzerland, together with four from the United States. Under the auspices of the Board, and independently of the missions sent by the Ministry of Education, students were sent to engineering colleges in Western countries, and apprentices to the United Kingdom for training in the workshops of the British Railways, General Electric Company, Marconi, and similar firms. The Board itself received technical advice in the form of plans and estimates from six foreign consultant companies, three British, two American, and one German.

At present Iraq possesses a university all but in name. The constituent colleges—many of which were started during the last ten years—are reasonably well established and attended. The general tendency is to stress science and professional subjects and to shake off the tyranny of literary subjects. Though the College of Law still attracts the largest number of students, yet the College of Arts has comparatively fewer students than the scientific and professional colleges. A further notable social development with far-reaching consequences is the enrolment of women in the professional institutions.

The teaching staffs are predominantly Iraqis, and received their education in universities in the Near East, Europe, or America. Academic standards may not yet be high enough, but meanwhile

foreign staff are employed in various capacities. At the request of Iraq a mission of English university teachers inspected the institutions of higher education in 1953 with two ends in view: first, to make suggestions in regard to the formation of a University of Iraq; secondly, to regularize enrolment of Iraqi students in British universities.

Improvement of standards is also being sought by sending students to foreign universities. Here again the trend is definitely towards science and technology and away from literary subjects. In 1950–1 more than half a million pounds was spent on scholarships abroad, and altogether one hundred and thirty-three students were sent during the year to foreign institutions, mostly in the United Kingdom.

The training of skilled workers and semi-skilled labour in the foreign oil industry to which we called attention, beneficial on the whole, is not without its political, social, and cultural dangers. The oil industry is often centred in areas where it is necessary to establish modern housing estates with good facilities for transport, medical care, water, and electricity, in addition to paying higher wages and buying local produce at prices higher than those of the local market. Such ' colonies ', planted within a backward environment, tempt away, as they usually do everywhere, unskilled labourers from the surrounding countryside to seek higher wages and better living conditions. In the process they tend to sever their relations with their village, tribe, and family.

The Government of Iraq, however, has started a settlement scheme, controlled and planned both as a social demonstration and as an experiment in fundamental education. A notable example is the community of Dujaila near Kut barrage and Dujaila canal.[11] Members of the settlement were chosen by a committee, preference being given to people living in the vicinity, unemployed graduates of the School of Agriculture, retired army officers, and the like. The settlement is composed of small family holdings of sixty acres each. The land is state domain, but the settlers are guaranteed free title to it in ten years' time provided they follow the instructions of the management in the cultivation of their plots, planting fruit gardens, and building houses according to a standard plan. The settlement includes all the public services and amenities such as a school, a clinic, playing-fields, and co-operative stores. The scheme proved so successful that there is now keen competition for selection to the membership of this and other similar settlements.

Educational advice, material assistance, and loan of experts derived from foreign countries or international organizations are regularized by bilateral agreements or covered by international pro-

[11] For a brief reference to this settlement see Stephen Longrigg, *Iraq, 1900–50: A Political, Social and Economic History* (Oxford University Press, for the Royal Institute of International Affairs, 1953), p. 323.

grammes. Britain, as the former mandatory power in Iraq and as the present close ally of that country, continues to play its part. It is still the main recruiting source for experts and teachers. The development division of the British Middle East office in Cairo—a successor to the war-time Middle East Supply Centre—consists of highly qualified specialists in agriculture, animal husbandry, forestry, entomology, rural co-operation, education, and health. Its experts prepared within the last few years about two hundred surveys and reports at the request of local governments, and helped in the recruitment of technicians for executive work.[12] The United Kingdom Ministry of Labour has recently reconstructed the Technical Personnel Committee and widened its terms of reference to include the promotion of recruitment of experts to assist the development of under-developed countries and to facilitate the training of students from those countries in the United Kingdom. One of the most recent activities of the development division is the establishment in Iraq of a statistics office. Altogether there were about two hundred British experts in various departments in Iraq in 1952.

But Britain is not at present the only Western power offering assistance. There is indeed evidence that she is yielding ground to others. Thus, despite resentment at its Palestine policy in the Arab world, the United States seems to be gaining much ground and not only in Iraq. The U.S. Government recently concluded a cultural agreement with Iraq almost simultaneously with that concluded between Iraq and UNESCO. The agreement with the latter body achieved little more than tentative studies in fundamental education, general advice on technical education, and a timid report by a British expert on compulsory education, which do not seem to have been followed up by definite and sustained action. The agreement with the United States, however, was followed by the establishment, in the capital of Iraq, of an American Cultural Institute to control and regularize, in co-operation with the Government of Iraq, a programme of technical assistance under Point Four.[13]

An international mission sent in 1951 at the request of Iraq by the International Bank for reconstruction and development, which included United Nations experts on agriculture and UNESCO experts on education, tendered useful advice on Iraq's schemes of development. The report of this mission was published in 1952 and contains important sections on education.[14] The real value of the report, in so far as education is concerned, is not so much its recommendations, which cover familiar grounds and repeat well-known

[12] *Britain and the Middle East Development* (a publication of the Central Office of Information) (London, 1951), pp. 43–4.

[13] *New York Times*, January 12th, 1953; cf. *Neue Zuricher Zeitung*, May 27th, 1953.

[14] *The Economic Development of Iraq* (Johns Hopkins Press, 1952), *passim*, but specially pp. 62–71, 385–426.

truths, but its bluntness in stating the problems and indicating the way to tackle them. Schemes of agricultural and industrial development may prove useless, it argues, if the people these schemes are designed to serve are not taught at the same time the best means of utilizing the resources made available to them through development. The whole thing is clearly tied up with education; education that produces not only good leaders and technicians but also an efficient and intelligent manpower. Therefore the report stresses very strongly the need for universal literacy, extension and improvement of technical education, and fundamental education for illiterate adults above school age.

Egypt

Egypt is a densely populated country.[15] Its national existence in modern times antedates that of any of the Arab states in the Near East and its agriculture is much more advanced. It gradually and at great cost revolutionized its agriculture through elaborate irrigation projects, use of fertilizers, selection and breeding of cotton strains, and intensive application of labour to the land. Thus, the country's yield per acre is far above the level of the neighbouring Arab countries. Egypt's present policy is to expand agricultural production and to stimulate industry so that an increased national income will account for the mounting increase of population.[16]

How is this going to be achieved in the face of overwhelming odds? For despite the fertility of the Nile Valley, the peasants as a whole have a very low standard of living in housing, sanitation, and nutrition, and the greater number of them are illiterate. Three ways are now being tried with varying degrees of intensity and success by the authorities to improve the lot of millions of landless, illiterate peasants. They are: increasing the area of agricultural land, reform of land tenure, and industrialization.[17]

The Agrarian Reform Law introduced by the present regime in 1952 provides the legislative basis for the transfer of one-tenth of the cultivable land, mostly large holdings owned by comparatively few landlords, to small and landless farmers. At the same time more land is being made available for cultivation and habitation through the construction of further hydraulic, engineering, and agricultural works in the Nile Valley and Delta, and through reclamation of desert land west of Alexandria.

Furthermore, in the post-war years a five-year development plan with a capital of fifty million pounds was prepared and operated, in which education, health, and agriculture figured prominently. For

[15] Total area is 363,000 square miles (only 13,000 cultivable and habitable); total population around 20,000,000.

[16] Cf. *Al-Ahram*, December 1st, 1953.

[17] *The Middle East: A Political and Economic Survey* (issued by the Royal Institute of International Affairs) (London, 1951), p. 182.

some time the Egyptian Agricultural Society was experimenting with the establishment of model villages, and its village at Bahtim is a successful enterprise and a show piece. Since its formation in 1939 the Ministry of Social Affairs was similarly experimenting with rural centres such as the one at Abu Nomros. More recently such villages and centres were established on reclaimed land and elsewhere. Every village is composed of a well-planned housing estate with its own water-supply, a mosque, a clinic, a school, a public library, and playing-fields.[18]

Recognizing the need for foreign technical assistance, Egypt has recently turned to the United States. The agreement signed lately provides for material assistance, technical advice, and scholarships in agriculture and other subjects. A survey of 'the industrial possibilities of Egypt' was provided for, and reclamation of desert land west of Alexandria was started. With techniques used for replanting the 'dustbowl' of the North Central States, American engineers with Egyptian trainees and labour are converting this desert into arable land. Under a similar arrangement land is being reclaimed for the settlement of landless peasants near Fayyum at a cost of twenty-five million dollars, ten million being the United States' contribution.[19]

All this naturally raises the question as to what provision is made in the Egyptian educational system to meet the needs of the nation's development. There is no doubt that education in Egypt has made a great advance in the last three decades. Egypt, however, shares with other Arab countries a literary tradition and still suffers from a rigid curriculum, but there is evidence that a shift of emphasis, starting as an educational thought, is now steadily being translated into practice. Revision of the curricula was recommended by the second Arab Cultural Conference so that, among other reforms, it will give free play to the teacher's initiative and the child's curiosity,[20] and will foster vocational and technical education.

At the beginning of the academic year 1953–4 Egypt had, according to an official source,[21] 8,050 schools with 2,059,330 pupils; and yet illiteracy is still the lot of about two-thirds of the population. Here, again, social and economic development do not depend merely on grandiose agricultural and industrial schemes which do not include as an integral part effective provision for universal literacy, fundamental education for illiterate adults, vocational and technical

[18] *Bulletin of the Egyptian Education Bureau* (London, May–June, 1950), p. 6.

[19] *The New York Times*, January 12th, March 20th, and June 19th, 1953; *The Times* (London), February 24th, 1953; *La Bourse Egyptienne*, June 19th, 1953.

[20] *Arab Cultural Annual*, III (Cairo, 1953), pp. 511 *et seq.* (In Arabic.)

[21] *Al-Jumhuriya* (the organ of the present regime), December 19th, 1953. According to the same source these numbers were 6,675 and 1,505,236 respectively in 1951–2.

secondary schools, and a well-balanced university training, locally and abroad, for leaders in government, professions, business, and the official schemes of development. It is clear that universal literacy is still an unrealized hope; it is also clear that combating adult illiteracy is still not more than a symbolic attempt.[22] Both must take time.

We are on firmer ground, however, when we come to examine the value of secondary and higher education for social and economic development. Secondary education in Egypt was reorganized, according to a new law enacted in 1951, into an academic and technical side. The latter includes agricultural, trade, commercial, and domestic science schools,[23] with about twenty-eight thousand students in 1950–1. Official sources are, however, silent on their future employment: how many went up to universities, how many found suitable employment, and how many, if any, were 'wasted'.

The number of undergraduates at the four universities [24] (about forty thousand in 1951–2), compared with the number of students in all types of secondary schools other than technical (about ninety-nine thousand), may indeed be considered too high. But since the end of the war there is little evidence of serious unemployment among university graduates, and the rolls of the various colleges confirm that the professional schools, including those of agriculture, science, engineering, medicine, and commerce, are on the whole more attended than the schools of arts. Furthermore, the enrolment of women, a significant sign of their emancipation, now reaches such unconventional fields as engineering and agriculture.

Nor is this all accident depending on the whims of students. They and their parents are shrewd enough to gauge their own needs in farm, factory, or shop; or the needs of prospective employers, private or official. State scholarships are planned with similar care. Thus, according to the Director of the Egyptian Education Bureau in London, the subjects being studied by some eight hundred Egyptian students in universities in the United Kingdom during 1953–4 are, in order of numbers, as follows: science, engineering, agriculture, education, medicine, and literary subjects. Further confirmation of this tendency may be found in the lists of books published.

Syria

Syria [25] is another Arab country with vast possibilities for develop-

[22] The writer is well aware of the fact that in 1951–2 over 100,000 adult illiterates were handled.

[23] *Arab Cultural Annual*, II (Cairo, 1951), pp. 368–423. (In Arabic.)

[24] The American University at Cairo, incorporated in 1919, had during 1953–4 some 400 students, of whom 175 were Egyptians.

[25] Total area 66,000 square miles (roughly one-third is cultivable); total population around 3,000,000. For a background study see Albert Hourani, *Syria and Lebanon* (issued under the auspices of the Royal Institute of International Affairs, 1946).

ment requiring the agency of science and education to aid it. It has more land than could be brought under cultivation by primitive methods, and its water resources (Euphrates and its tributary Khabur, Orontes, Barada, and Yarmuq) are abundant but not yet sufficiently utilized. The living standard of the population is not much different from that in Egypt and Iraq. Hence the problems now facing Syria are much the same as those facing Iraq. In considering how Syria is meeting this challenge, let us remember that France's control did not end, and full national control did not become a reality, till after the end of the Second World War.

The main development projects in Syria are connected with irrigation, electrification, reclamation, and drainage. A survey of the Khabur project for the irrigation of 22,239 acres has been completed. A survey of a projected dam over the Yarmuq to generate electric power for Syria and Jordan and to irrigate land in both states at a cost of sixty million dollars was undertaken in 1952.[26] Another survey of a hydro-electric and water conservation scheme on the Euphrates was made. One of the promising experiments in agriculture is the remarkable increase in cotton production. Within two years, 1949–51, cotton acreage has increased sevenfold and the output threefold. Markets were found for the Syrian cotton in Western Europe.

In all these projects there is as little reliance as possible on foreign assistance. Thus, apart from advice received from the British Middle East Office in Cairo on the collection and use of statistics, the employment of a British forestry adviser and the receipt of some plans prepared by the International Bank, Syria has refused Western aid on principle.[27] Unhappy memories of the French mandate and resentment at America's help in the creation of Israel in Palestine are two of the reasons given for this attitude. According to a reliable American source, even Lebanon, which is perhaps the most Western in outlook among Arab states, is suspicious of Point Four's ' political connotation ' and resentful of America's support of Israel.[28] Another, less idealistic, reason was given in the Arabic Press for refusing American aid. It was pointed out that six Arab states with a total population of forty million were allocated a total American aid of forty-three million dollars, while Israel alone, with a population of less than two million, was allowed a hundred and twenty-seven million dollars for the same period ending 1952.

But politics apart, what provision is Syria making in her educa-

[26] *United Nations Review of Economic Conditions in the Middle East, 1951–2* (New York, 1953), p. 22.

[27] Technical assistance was, however, sought and received from UNESCO on fundamental education and vocational secondary education; see p. 34 of the *Report of the Syrian Delegation* to the UNESCO Conference held in Paris, 1952. (In Arabic.)

[28] *The New York Times*, January 12th, 1953.

tional system to train personnel? Legislative decrees issued in 1952 provide for the organization, under a new section in the Ministry, of vocational secondary education in crafts (decided according to local needs, rural or urban), commercial, and technical subjects; for the gradual establishment of separate schools for these subjects; and, in the meantime, for sending students and teachers to receive the required training abroad. The state hopes to safeguard in this way a permanent and adequate flow of skilled working hands and technicians into the fields of agriculture, industry, and commerce. In the school year 1951–2 there were six state vocational schools.[29]

The Syrian university is of very recent origin. Up to 1946 it was composed of the College of Law and the College of Medicine. Since then colleges of arts, sciences, engineering, and a higher institute of education were established. A notable omission which must affect present development projects is a college of agriculture. Of the vocational secondary schools mentioned above, only one is for agriculture: the farm school at Salamiya near Hama.[30] It could of course be developed as a constituent college of the university.

Before the termination of the French control most students from Syria went to France for higher education. Now Syria is torn between English- and French-speaking countries. French during the period of the mandate was the compulsory foreign language in school. Naturally students trained in it went for higher education to French-speaking countries. After the end of the French mandate English was introduced as an alternative compulsory foreign language. An increasing number of students are now selecting English rather than French and going to universities in English-speaking countries. However, many Syrian students go to Egyptian institutions or to the American University of Beirut in Lebanon.

Other Arab League Countries

Having dealt with Iraq, Egypt, and Syria in some detail, we propose—partly because the problems are similar—to deal very briefly with the remaining countries that constitute the Arab League, namely Yemen, Saudi-Arabia, Lebanon, and Jordan (including Arab Palestine).

Yemen, with an estimated area of seventy-four thousand square miles and a population of about four million, lies at the extreme south-western corner of the Arabian Peninsula. It was once a centre of civilization and great wealth in pre-Islamic times. Unlike other Arab countries liberated from foreign domination, it still leads a rather isolated existence, from which it is slowly emerging through its membership in the Arab League. But despite this fact, Yemen

[29] *Arab Cultural Annual*, III, p. 133.

[30] *Education in Arab Countries of the Near East*, by Roderic Matthews and Matta Akrawi (American Council on Education, Washington, 1949), p. 377.

is conspicuous for the absence of any reference to it in the three annual reviews so far issued by the cultural department of the League between 1949 and 1953, obviously for no other reason than lack of information or lack of anything to refer to. If, therefore, the present discussion makes no mention of its problems, it is not for lack of interest but simply because of ignorance.

Saudi-Arabia covers nearly nine-tenths of the whole peninsula and has a population which is estimated at eight million. Its greatest natural resource is oil, which was discovered in large quantities in and near Al-Hasa province (bordering on Kuwait), and is being exploited by the Arabian American Oil Company (Aramco). A great deal of the oil royalties is being used for development: new railways and highways, airports and harbours, have received the greatest share, but irrigation, public utilities, and social services including education have not been neglected. Thus with technical assistance from Aramco several small-scale irrigation works were completed and five experimental stations for agricultural research and training were established. The one at Al-Kharj, with a 2,965-acre farm, was started under the auspices of the (British) Middle East Supply Centre during the war, and now taken over and developed by the American company. Up to 1952, Saudi-Arabia received twenty million six hundred thousand dollars' assistance under Point Four.[31] Skilled workers receive training in the oil industry and in official development and public-works projects. Furthermore, the government is planning the establishment of trade schools, and meanwhile sends scholars for training abroad, chiefly to Egypt, America, and England. The number sent abroad in 1950 was one hundred and ninety-two.

Lebanon—in its physical and intellectual climate the Switzerland of the Arab Near East—occupies an area of about four thousand square miles with a population of nearly one and a half million, almost equally divided into Christians and Muslims. It is reputed to have the highest rate of literacy among the Arab countries, owing largely to a concentration of foreign educational efforts, chiefly American and French, since the middle of the nineteenth century. But vocational education is still embryonic, and higher education is partly American and partly French, represented in the first case by the American University of Beirut and in the second case by the Université de St. Joseph, established by the Jesuits in 1875. The orbit of the Jesuit university was, and still is, largely restricted to Lebanon, and more particularly to the Latin Christians. But on the whole the Jesuit university has a reputation for scholarship and high academic standards, and was considered, during the period of the mandate, as the guardian of French culture.

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[31] *United Nations Review of Economic Conditions of the Middle East, 1951–2*, pp. 6, 22, 107.

The American University of Beirut, established in 1866 as the Syrian Protestant College, has played and continues to play a major role in the intellectual, political, social, and economic development of some Arab countries. In the words of its present President, the university's one purpose is " educating men and women for creative, responsible lives in their own communities". Its location in " the meeting-place of Western and Near Eastern civilizations creates an opportunity and a responsibility for integrating the positive values of both civilizations. . . "[32] That it has been successful in its task may be demonstrated in many ways, the simplest being a survey of the education of the present generation of Arab leaders in the fields of politics, professions, and letters, a great many of whom were educated, partly or wholly, at the A.U.B.

Since its independence, Lebanon has been trying to redress the balance; state schools now outnumber foreign and independent schools; and out of a number of specialized high schools was formed in 1944 (as an independent institution) the Lebanese Academy with a school of arts, a school of economics and political science, a school of music, a school of painting and sculpture, and a school of architecture. It is clear, from the presence of two well-established foreign universities, and the new independent academy, that Lebanon is comparatively well provided with trained personnel for whatever schemes of development she may undertake. The use of the waters of Littani for irrigation and generation of power is the most prominent among these schemes, but its execution under Point Four with a capital of seven million dollars was frustrated by political complications.

Jordan, though certainly not less resentful of American policy regarding Palestine, feels impelled by her poverty and the crippling responsibility for the refugees to accept aid not only from her ally, Great Britain, but also from the United States. Jordan's area (before the incorporation of some three thousand square miles of the central area of Palestine west of the River Jordan) is 34,750 square miles, and the present population on both sides of the river, including the refugees, is well over a million. Jordan has one trade school and one agricultural school, but no facilities for higher education. Scholars are, however, sent abroad for training: to the universities of Egypt, Lebanon, Syria, Iraq, and to Western universities.

With a development loan of one and a half million pounds from the United Kingdom Treasury and some six and a half million dollars of American assistance under Point Four, Jordan is planning, together with Syria, to construct a dam over the River Yarmuq for the purpose of irrigation and generation of electricity. Minor irrigation works have actually been built on some of the streams flowing into the River Jordan. Point Four seems to be working smoothly in

[32] From a Foreword to the Catalogue for 1953–4, p. 6.

Jordan, for apart from irrigation and electrification projects, there are provisions for increasing the number of technical and commercial sections attached to existing secondary schools, establishing additional training colleges for men and women, and organizing a centre for training community leaders.[33]

Social Implications

Enough has been said to make clear the point that the Arab Near East is eager to learn, and utilize for social and economic advance, Western science, technology, and capital, subject to the absence of political pressure or conditions. The process of adopting Western scientific knowledge and technical skill is, however, only one phase of the Westernization which has now been under way for nearly a century and a half. The other is the adoption of Western methods, ideas, and attitudes of mind, a phase which falls outside the scope of the present discussion. We must not, however, stress unduly the material side and forget the potency and significance of the cultural side. For the purpose of summing up the previous discussion it is proposed merely to touch upon, or simply to pose, some questions necessarily restricted in range to the very recent past. These fall under four heads: (1) the rise of organized labour; (2) the emergence of an articulate middle class; (3) the emancipation of women; (4) the problem of cultural orientation. The Second World War and its aftermath had the effect of accelerating the pace of change or pressing the urgency of following certain cultural trends. There is no denying that the change in the directions indicated is still on a small scale, but there seems to be little or no chance of arresting the change or avoiding the imperative necessity of facing the challenge of cultural orientation.

Partial mechanization of agriculture with a view to increasing production was during the war a general policy promoted alike by national governments, the British Government through the Middle East Supply Centre, and the American Government through Lease-Lend supplies. High prices tempted landlords and owners of capital to engage experts to replace primitive tools by the mechanical plough, the tractor, and the combine, to experiment with new methods and to pay higher wages for skilled and efficient labour. At the same time labour was much in demand in war camps and establishments; most skilled labour was in one way or another working for the army, and the army workshops turned out to be a vast training-field for semi-skilled labour which was absorbed after the war into the various national projects and the enterprises of the oil companies. In consequence, workers became increasingly aware of their importance, contact with Western management and foreign propaganda of all sorts helped to increase their confidence and to formulate their philosophy.

[33] *The New York Times*, January 12th, 1953; *Christian Science Monitor*, March 3rd, 1953.

The Arab labour movements, which were generally weak before the war, started to show signs of a new life, so that in almost every country except Saudi-Arabi and Yemen, labour is now a force to be reckoned with.

Many factors contributed to raise, to pre-eminent positions undreamt of a few decades ago, a new middle class in the professions, politics, and business. This phenomenon was coupled with another, not less significant: the gradual assumption by women of an active role in the professions and even politics. Almost Western in the superficialities of dress, home comforts, and amusements, these men and women seem to be in an unsettled or transitory stage as regards their way of thinking, their cultural attitudes, and their moral values.

They are all conscious of belonging to a larger unity of the Arab race and sharing in a common culture which incorporated, throughout its historical development, important elements of what now constitutes Western culture, and is now incorporating with great rapidity Western technology. Hence the feeling of some cultural affinity which usually exists between the educated Arab and the Western way of life, an affinity which has not yet been examined scientifically by either Arab or Western scholars. Nor is this affinity merely due to the effects of Western education on the Arab mind; its deeper cause is a fundamental unity of the two cultures, in spite of many dividing factors. It is therefore a great mistake to read into the current political conflicts with the West a cultural dislike of its civilization. No description of the situation is more convincing to me than the retort of a very highly placed Arab intellectual to my question: "Why, if you feel so strongly against the English," I asked, "do you send your son to Oxford for his education?" His answer was direct and prompt. "Because," he said, "I think it is the best I can give him. If I quarrel with English politics, I still have a great respect for English education and culture." Substitute the more general 'Western' for the particular 'English' and you have the problem very aptly analysed.

Cultural Influences

Hitherto there were two currents of cultural influence in the Arab world, the one Anglo-Saxon and the other French. There is no doubt that the French influence, despite its strength built up during several decades of careful and determined endeavour, suffered a great eclipse during and after the end of the war, largely through political complications. Each of the two Anglo-Saxon influences, the English and the American, is at present manoeuvring for position and gathering momentum: whether for a trial of strength in rivalry with each other, or for complementary co-operation, only the course of future events will show. But there are already signs indicative of the shape of things to come. First, there are far more Arab students at present studying in the United States than in the United

Kingdom, almost a reversal of the pre-war ratio; secondly, Near and Middle Eastern contemporary studies are being developed in many American universities, whereas English universities still concentrate on the ancient and mediaeval studies, so that there is only one lectureship at one university for contemporary Middle Eastern history; thirdly, contemporary studies of the region are being developed in American universities not only by American teachers but by many Arab specialists engaged for the task; finally, America is prepared to spend, and does in fact spend, large sums of money on Near and Middle East research, whereas Britain is spending comparatively little.

Ultimately we shall know the outcome, but now there has appeared a new, subtle, and vigorous influence—Russian Communism—which complicates the situation. But any remarks that one ventures here on this subject cannot be more than speculation—speculation, however, that helps to place limits to the possible. It is still possible to ' contain ' Communism out of the Near East: internally, through social and economic development and through the hold that Islam has on the masses; and externally, if the West refrains from political action which provides Communist propaganda with material to paint the West in dark colours, if the West recognizes by study and research more clearly the close affinity between its culture and that of the Near East, and if the West revises its present conception of the Near East problems as measured simply by strategy, power politics, and oil resources, instead of by, or at least together with, the spiritual, intellectual, and emotional forces that motivate the people of the area.

The truth that emerges from the above remarks is that Western technology alone is not sufficient; it may bring material prosperity, but it may do so at a price; the Near East may become, as indeed it is becoming, materially prosperous, but it may lose its soul in the process. Consider some of the symptoms which are already there: the break-up of the tribal and clan relationship, the drift of the rural population to the squalor of urban suburbs, the widening rather than narrowing of the gap between the rich and poor, the loosening of family ties, the decrease in religious observance, the laxity of morals, and so on. Such symptoms are often misinterpreted, intentionally by the propagandist, and unintentionally by the sincere, if narrow, conservative to discredit Westernization. This usually happens in the heat of political controversy, and rarely if ever in the calm atmosphere of rational evaluation. But cultural sifting is going on in the Arab Near East, and has in fact been going on for well over a century. Given political stability and internal order, its success should culminate in a cultural synthesis with the West. This depends on the adaptability of Islam and on the attitude of the West. That Islam is adaptable has been proved during the last hundred years: Muslim society has been radically transformed in the politi-

cal, social, and economic fields through its contact with the West. That the West has changed its attitude is also proved, though the change is not yet sufficiently radical to achieve full unity between it and the Arab Near East. Upon the success or failure of the achievement of this unity must depend the orientation of the Arab world. The choices are clearly three in number. First, there are good and compelling reasons for a continuous Western orientation; secondly, there are also reasons for a possible halt and even reaction [34]; finally, there is a danger of the Arab Near East being driven, contrary to its traditions and tendencies, to undertake a new and unknown venture.

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[34] Cf. the remark by the former President of the American University at Cairo to the effect that political pressure from the West had in post-war years robbed it "of its attraction as a civilization and as a culture", in *Evolution in the Middle East,* a series of talks by specialists published by the Middle East Institute, Washington, 1953, p. 17.

CHAPTER THREE

SOCIAL AND ECONOMIC DEVELOPMENT IN INDIA

For several decades the Indian economy has suffered greatly from cramped development. When the Western countries were making rapid progress in industrialization, India lagged behind because it did not control the direction of national policy. The backwardness and lopsidedness of Indian economy are reflected in the unbalanced occupational structure there.[1] Yet despite the large proportion of the population engaged in agriculture, the country has not been able to attain self-sufficiency in food—in fact, the position in this respect has been particularly difficult during the last decade—or in raw materials for her industries, whilst unemployment and under-employment continue on a large scale and constitute the gravest economic and social problem.

Planning

Immediately after independence the government's biggest task was that of social and economic reconstruction. In March 1948 they appointed a *Planning Commission* to plan the effective and balanced utilization of the country's resources, to determine the nature of the machinery necessary for securing its successful implementation, and to appraise, from time to time, the progress achieved in its execution. In December 1952 this commission finalized their draft outline of the First Five-Year Plan after it had been thoroughly examined by the Central and State Governments and publicly discussed throughout the country. The plan was prepared in accordance with the state policy of striving to promote the welfare of the people by securing and protecting, as effectively as possible, a social order in which justice—social, economic, and political—shall be imbued into all the institutions of national life.

In India, the problem of development is twofold. On the one hand the potential resources of the country—its agricultural and mineral wealth, its rivers and forests—have to be fully utilized, and on the other, its manpower has to be mobilized for nation-building purposes. The First Five-Year Plan attempts to transform the whole economic system of the country by building up a big productive machine in order to create, through better health, improved sanitation, and widespread education, conditions which will promote

[1] About 68 per cent. of its adult population is still engaged in agriculture, about 14 per cent. in industry, 8 per cent. in trade and transport, and the remaining 10 per cent. in various professions and services.

a fuller life for all. Conditions in which material as well as cultural amenities will find their place, and the latent powers of our people, who have suffered so long from the effects of cramped development, will be released. Political independence favours the release of this creative energy.

Under the Indian constitution the Central and State Governments have their clearly defined spheres of action; in some, such as economic and social planning, the governments work in co-operation. A *National Development Council* has been set up, composed of Ministers of States and members of the Planning Commission (with the Prime Minister as chairman of the central cabinet), to ensure a co-ordinated implementation of the plan throughout the country. To do this the state has naturally to assume much greater social and economic responsibility than in the past. Unless it exercises adequate power and control in such matters as capital formation, provision of health and education, the over-all co-ordination and re-alignment of the productive forces and class relationships within society, a rapid transformation of the national economy is not possible. Great emphasis has been placed on the co-operation and enthusiasm of the people, without which the Five-Year Plan cannot succeed. They *must* become partners in the plan and be associated closely with its formulation and implementation from stage to stage in every field of activity: agriculture, industry, or social welfare.

In a democratic plan the whole responsibility and initiative for enlisting this association and co-operation rest on the agencies of administration. Formerly, under foreign rule, there was no identity of aims between the people and the administration. Now the latter is trying to win their confidence and active support by setting up suitable new agencies or revitalizing old ones. Here the work of some of these agencies and of their dealing with the training of personnel will be discussed. The plan, it must be remembered, has been in progress for only about three years and it is difficult at this stage to assess with accuracy its full import. This appraisal must, therefore, be regarded for the present as tentative.

Let us take the educational programme first. The agencies responsible and concerned with it in varying degrees are the Central Government, State Governments, local bodies, and private organizations. According to the constitution, education is primarily the concern of the constituent States of the Union. The Central Government, however, have an over-all responsibility for helping, co-ordinating, and guiding the work of education so that in important matters national policies can be evolved and satisfactorily carried out. *The Central Advisory Board of Education* [2] advises

[2] Composition: some members of Parliament; representatives of State Governments and the Inter-University Board; educationists appointed by the Government of India, and with the Union Minister of Education as the chairman.

the Government of India and State Governments on *educational problems of general interest which may be referred to it.*

Education

According to a directive in the new constitution, free and compulsory education should be provided for all children up to the age of 14 years within ten years. At present, educational facilities are provided for about 40 per cent. of the children of the 6 to 11 age-group; 10 per cent. of boys of the age-group 11 to 17, and only 0·9 per cent. of the persons in the age-group 17 to 23. The plan envisaged: that at the conclusion of the first five-year period educational facilities should be provided for at least 60 per cent. of all the children of the age-group 6 to 11; and these should be gradually extended upwards to bring children up to the age of 14 into schools as soon as possible.[3] The responsibility for the provision of free and compulsory education devolves on the state. Due to inadequate resources, the Central Government have so far undertaken only a limited responsibility in this field, and in co-operation with the State Governments are working out schemes for intensive educational development in selected areas. Grants have been made to State Governments to establish or develop various institutions for working out sound techniques and improving the quality of primary, basic, and social education. Financial assistance for schemes of educational expansion is also contemplated.

For the improvement of university and secondary education two commissions were appointed which brought out their reports in 1949 and 1953 respectively. The Government are now considering how to implement their recommendations. The Secondary Education Commission has suggested far-reaching changes in the structure, curriculum, and methods of teaching and examination in secondary schools. One of its significant recommendations—with far-reaching social consequences—is the establishment of multipurpose schools to train students not only for colleges and universities but for various vocational pursuits, and thus redress the ill-balanced distribution of educated youth between academic and practical pursuits. In accordance with the recommendations in the Indian Universities Commission report, a *University Grants Commission* has been set up to co-ordinate post-graduate work in the universities and avoid unnecessary duplication. The commission will also advise on the allocation of grants-in-aid from public funds to universities and certain other institutions of higher learning.

In view of the increasing demand for technically trained personnel for the many new schemes and projects of development, an *All India Council for Technical Education* has been set up, whose main function is to survey the needs of the country for higher technical educa-

[3] *Annual Report, 1952–3:* Ministry of Education, Government of India.

tion and to advise on the organization, improvement, and co-ordination of facilities to meet them. It has appointed a technical manpower committee which is collaborating with the Planning Commission in assessing the requirements of the country for various types of technical personnel. The council is representative of the various interests which are vitally concerned with industrial development, such as organized industrial and commercial associations, workers' associations, the State Governments, recognized professional bodies, universities, and technical institutions. Its work falls broadly into three categories: the laying down of standards, the improvement and strengthening of the existing institutions, and the establishment of new institutions. The council functions through certain standing committees and various *ad hoc* committees; its four regional committees (for the east, the west, the south, and the north) survey the facilities, determine the needs in consultation with the states concerned, maintain direct liaison with industry, and advise on desirable developments within their respective regions.

The Central Government have contributed further to technical education by establishing eleven national laboratories covering a wide range of subjects, such as: physics, chemistry, food technology, metallurgy, fuel, glass, and ceramics; and road, building, drug, leather, and electro-chemical research. Besides the promotion of research in general, and testing, standardization, and further development of new products, these laboratories and institutions offer expert advice and facilities to scientists, universities, industries, and so on. They are thus playing an important part in disseminating scientific knowledge and in establishing useful collaboration between national laboratories, universities, and training institutes.[1]

In the field of technical and vocational education, the Central Government have undertaken four important schemes for post-graduate studies and research work.

At present *The Indian Institute of Technology, Kharagpur,* which is modelled on the Massachusetts Institute of Technology, has on its roll over nine hundred students, including forty-three students for specialized courses, forty students for the graduate course, and twenty students for post-graduate research work. When fully developed, the institute will provide technical education at different levels for two thousand students, with special reference to the application of the scientific method to the solution of industrial problems. The Government of India are trying to expand the *Indian Institute of Science, Bangalore,* by establishing a power engineering department with a high-voltage engineering laboratory, electrical-communication engineering, internal-combustion engineering, and a department of economics and sociology. *The Research Training Scholarship Scheme* came into operation in 1949–50 in order

[1] *Annual Report, 1952–3*: Ministry of Education, Government of India.

to promote research in universities and higher technical institutions. It is estimated that by the end of 1955–6 there will be three hundred and fifty senior scholarships and two hundred junior scholarships available for qualified research workers. *The Scheme for the Development of Research in Scientific and Technical Education* covers various recommendations of the Planning Commission.

In addition, grants have been given to the universities to increase the number of their research workers, to improve the equipment of their laboratories, and to create post-graduate departments where none existed previously; thus increasing the total output of research scholars. Also, at the instance of the *All-India Council for Technical Education,* qualitative and quantitative improvements have been introduced at fourteen engineering institutions providing instruction at under-graduate level. Progress has also been made in the practical training of technical graduates and diploma holders at approved industrial concerns as well as in government-controlled or -sponsored technical departments. For this purpose a Practical Training Stipends Scheme was initiated in 1949–50 under which there were four hundred and forty senior stipendiaries and a hundred and seventy junior stipendiaries (in 1952–3). By the end of 1955–6 it is estimated that there will be about five hundred senior and three hundred and fifty junior stipends available for the students.

The Council of Technical Education has recently made important recommendations for the provision of facilities for 'Management Studies'. It has suggested that national diploma courses be organized in: (i) industrial production and engineering, (ii) industrial administration, and (iii) business management, and that a national certificate course in foremanship be organized for persons employed in industries in a supervisory capacity and selected by their employers for such training. Some of the existing institutions have been selected to provide these facilities.

A planning committee under the chairmanship of the Union Minister for Commerce and Industry has been appointed by the council to consider proposals for the establishment of an administrative staff college as a joint enterprise of the government, industry, and the commercial community. This committee has also been asked to examine the question of setting up a national professional organization for promoting the management movement in the country.

During the short period of independence, India has made considerable progress in the field of education, although a great deal still remains to be accomplished. It is encouraging compared to progress in the preceding decades, but hardly satisfactory when set against the magnitude of the task. In 1947 primary education was available for only 30 per cent. of the children in the age-group 6 to 11, but by the end of 1952 this percentage had risen to about 40. In place of

237,000 students who took the school-leaving certificate or an equivalent examination in 1947, the number for 1952 was 586,000. The number of graduates in arts and science rose from 24,814 in 1947 to 35,588 in 1952. In the field of engineering and technology, the comparative progress is even more marked, as the number of technical graduates has more than doubled. Thus in 1952, about 2,500 graduates in engineering, 600 graduates in technology passed out of various institutions.[5]

Health

What is the position on the health front? The level of health in India, as indicated by death-rate and infantile mortality, is very low. Lack of an hygienic environment, proper nutrition, housing, water-supply, medical care, and education is one of the causes which retards the nation's progress towards better health. A serious difficulty which has to be overcome in this connexion is the shortage of personnel. The following table [6] indicates the magnitude of the task of providing trained personnel for a satisfactory health service. Though the targets aimed at, within the next twenty-five years, are considerably lower than those actually achieved in the U.K., they call for a concerted, intensive, and well-planned effort on the part of all concerned.

Class of Personnel	*Number available now*	*Ratio of Number in Column 2 to the Present Population of British India (300 Millions)*	*Existing Ratio in the United Kingdom*	*Suggested Ratio to be attained in 1971 in British India with an Estimated Population of 370 Millions*	*Number Required by 1971*
1	2	3	4	5	6
Doctors	47,500	1 to 6,000	1 to 1,000	1 to 2,000	185,000
Nurses	7,000	1 to 43,000	1 to 300	1 to 300	740,000
Health visitors	750	1 to 400,000	1 to 4,770[1]	1 to 5,000	74,000
Midwives	5,000	1 to 60,000	1 to 618[2]	1 per 100 births	100,000
Qualified pharmacists	75	1 to 4,000,000	1 pharmacist to 3 doctors	1 pharmacist to 3 doctors	62,000
Qualified dentists .	1,000	1 to 300,000	1 to 2,700	1 to 4,000	92,500

[1] *Based on 1935 figures.* [2] *Based on 1943 figures.*

[5] *Progress of Education in India, 1947–52: Quinquennial Review:* p. 5: Ministry of Education, Government of India.

[6] *Report of the Health Survey and Development Committee, 1946:* Vol. I, p. 13. (*N.B.* These figures are for undivided India.)

Under our constitution, matters connected with health fall largely within the purview of the states. The Central Government, however, have important responsibilities. Their activities are mainly confined to higher education and research; and to aiding the states in specific schemes such as those for the control of malaria and tuberculosis. They have made grants for upgrading certain existing medical colleges and research institutions, in order to provide the necessary trained personnel of the right calibre.

A number of organizations have been set up to ensure properly planned medical and health activities. Thus it has been decided to establish a *Central Health Education Bureau*. The bureau will cover a variety of activities, such as planning, administration; co-ordination of health activities, training of health educators, evaluation and research; publication of journals and bulletins, production of health films, film strips and other visual aids, and maintenance of a circulating library of such aids.

An All-India Council of Post-Graduate Medical Education prescribes, for the guidance of universities, standards for post-graduate medical education. *A Central Council of Health* has been established—with the central health minister as chairman and state health ministers as members—to consider and recommend broad lines of policy in all matters concerning health, such as the provision of remedial and preventive care, environmental hygiene, nutrition, health education, and the promotion of training and research.

Recently a scheme has been prepared to establish an All-India Medical Institute in Delhi which will include an under-graduate medical college, a post-graduate teaching centre, and a dental college with a hospital for practice.

Another matter which has been engaging the attention of the Government of India—because of its vital connection with all development schemes for raising the standards of living—is the problem of population control. Three experimental units have been started to conduct pilot studies in the use of safe-period method of family planning. A special section for family planning has been formed at the centre in the Directorate General of Health Services so that it may serve as a regular source of reference, co-ordination, and study.

Amongst other measures taken is the creation, in co-operation with WHO, of a central BCG organization. Tuberculin testing and mass BGG vaccination have already been introduced in nine states, and are soon expected to cover the remaining states.[7] Three training and administration centres were established at Delhi, Patna, and Trivandrum, to train medical students, post-graduate workers, nurses, health visitors, and technicians. Special emphasis is laid on

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[7] *Report of the Ministry of Health, 1952–3*, pp. 51–2.

the preventive side of tuberculosis and on home, rather than hospital, treatment.

The national malaria control scheme, which is to be implemented under the Indo-United States agreement, is designed to provide a programme for malaria control on a nation-wide basis. It aims at establishing a hundred and twenty-five malaria-control units for protecting the health of a hundred and twenty-five million people living in the malarious parts of the country. Of these, seventy-five units have already been set up and the remaining are expected to be in operation during 1954–5.[8]

In co-operation with UNICEF, the Central Government are establishing a department of maternity and child health at the All-India Institute of Hygiene and Public Health, Calcutta, to serve as a national training centre in this important field.

Agriculture and Community Development

We have dealt first with the two most important social services of education and health, but it is obvious that their development is integrally linked with that of national resources.

India has therefore embarked on a vast agricultural programme to double her production in the next fifteen years. The pace of development depends largely on the speed with which research workers find solutions to the practical problems of cultivators, and on the efficiency with which the solutions are carried over to the latter. At present, three agencies of the Central Government carry out these research and extension activities.[9]

The Indian Council of Agricultural Research promotes, guides, and co-ordinates agricultural research. It initiates suitable lines of work, gives financial assistance for approved schemes, and takes up certain schemes for direct implementation. In the sphere of extension work, a Council of Agricultural Education was set up under it with a view to re-orienting agricultural education. Periodical seminars of agricultural-extension workers in the country are being organized to enable closer contact between research workers and farmers.

The *Central Research Institutes* are engaged in a variety of fundamental and applied research projects. These institutions are located at different places—the Indian Agricultural Research Institute at Delhi, the Potato Research Institute at Patna, and the Rice Research Institute at Cuttack. Finally, there are also *Commodity Committees* which have been established for research in cotton, jute, tobacco, sugar cane, oilseeds, and other commercial crops. They represent all interests concerned, for example, growers, traders, processors; some committees have already done good work in their respective fields.

[8] *Ibid.*

[9] *Report of the Ministry of Food and Agriculture*, pp. 26–9.

One of the most important developments that have taken place in India is the organization of *Community Projects and National Extension Service,* the main purpose of which is to tackle the problems of rural reconstruction, not in a haphazard manner but as a co-ordinated activity for raising the whole level of village life. The main lines of activity are: agriculture and related pursuits, minor irrigation works, improvement of communications, education, and health. Subsidiary occupations are: housing, training of workers, and general social and cultural welfare. These projects have, in many centres, stirred the imagination of the village folk. With some financial help, people have voluntarily constructed new link roads, dug wells, cleared tanks and village ponds; increased the production of food grains by sowing seeds of better quality and by using manure; opened new schools for children, and started hospitals for the sick. Primary responsibility rests on the people themselves. The Planning Commission lays down broad policies and exercises general supervision, while committees at the state and district levels advise the official agencies on the selection and development of suitable projects. At the end of 1951–2, fifty-five areas were selected for intensive development in different parts of the country, but the number has since risen to eighty-one in response to demand. On the average, a project area covers approximately four hundred and fifty to five hundred square miles with about three hundred villages and a population of about three hundred thousand. Each area is divided into three development blocks of about a hundred villages, each of which has its own paid and honorary workers who co-operate in the various activities. As the idea developed, the pace has been increased by establishing a network of 'national extension centres' so as to bring the entire rural area, if possible, under extension service within a period of about ten years. Under this modified scheme the total expenditure on each area has been considerably curtailed, but the general approach and scope of activities remain unchanged. During the First Five-Year Plan about one hundred and twenty thousand villages, i.e. nearly one-fourth of the rural population, are to be brought within the operation of the extension service.

For working out these community projects successfully, the training of personnel—village-level workers, project executive officers, and technical staff—is of the first importance. The Government of India, with the assistance of the Ford Foundation of America, have been able to establish thirty training centres, in which thirteen hundred and twenty-four students and village-level workers, and sixty-six supervisory personnel, are under training. By the end of 1952, nine hundred and forty-six village-level workers and a hundred and eighty supervisory personnel had completed their training and had begun work in project areas.[10]

[10] *Five-Year Plan Progress Report for 1951–2* and *1952–3.*

Public Co-operation

The Government of India have also set up a *National Advisory Committee for Public Co-operation,* for securing people's co-operation on a nation-wide basis. It is representative of different sections of opinion in the country and reviews and assesses the programmes of public co-operation. An organization called the *Bharat Sewak Samaj* (Society for the Service of the Country), which is a non-official and non-political organization, explores and develops avenues of voluntary service for socially conscious citizens. It provides a common ground for all who wish to give part of their time and energy to the implementation of the national plan.

Some outstanding examples of such public participation are: *Shramdan* (Free Labour Service) by villagers, workers, and students; participation of women in ' small savings scheme '; organization of local works' programmes, and organization of voluntary welfare programmes.

Sarvodaya Samaj and Bhoodan Movements

Reference may also be made to two other voluntary organizations which are somewhat unique in their approach and objectives, though peculiarly congenial to the Indian genius. One of them is the *Sarvodaya Samaj,* which is really not a definite organization, but those who accept the central principles of Mahatma Gandhi—truth and non-violence—are associated with it. It may be described as ' a spiritual fraternity ', whose concept was fully evolved at a conference of his close followers held at Sewagram immediately after his martyrdom. The *Sarvodaya* seeks to reform and rebuild the entire life of the society on spiritual foundations, and expects that this will have quite revolutionary results in every field, ethical, social, economic, and political. It aims at building self-sufficiency in villages by encouraging them to produce their primary needs, such as food, cloth, and houses. It visualizes an order of society which will be free, not only from exploitation but also from rigid government control, its power being decentralized and distributed among the villages. The *Sarvodaya* ideal aims at a stage when external authority will ultimately become unnecessary, giving rise to a perfectly free society. It seeks to avoid class war by replacing the idea of private ownership of wealth by that of *trusteeship* of wealth. In this way, it tries to re-orient our entire thinking with regard to wealth and the relationship between individual and society, and believes that it is possible to convert the heart of man, and consequently refashion the social order, without violence and bloodshed.

This movement, started under the leadership of Acharya Vinoba Bhave, a great disciple of Mahatma Gandhi, is not merely a Utopian ideal but has a programme of action. The people who have faith in it work in close collaboration with the *Sarva Sewa Sangh,* a loose

federation of several well-known institutions which are primarily interested in certain constructive activities such as Gandhi Ji's basic education, handicrafts, Khadi, prohibition, service to the lepers, resolution of racial and colour tension, and the cause of peace.

Acharya Vinoba Bhave has recently launched the *Bhoodan Yagya* (land gift) movement, appealing to owners to share their land with landless peasants. It aims at an equitable distribution of land-wealth without recourse to coercion, forcible expropriation, or compensation, and without creating ill-will among the different sections of society. It has already made a tremendous impression on the people of India and abroad, not so much by its quantitative achievements and successes but by trying out a new technique and demonstrating the possibility of its success. But even quantitatively its success has not been negligible, for the land donated up to November 20th, 1953, amounted to about 2,200,000 acres (from about a hundred thousand donors) for distribution among landless peasants.[11]

The *Sarvodaya Samaj* also exercises its influence indirectly on the policies of the Government, who have recently established two important boards, namely, the *All-India Handicrafts Board* and the *All-India Khadi and Village Industries Board.* The functions of the *Handicrafts Board* are to advise on the problems of handicrafts and to improve and develop their production and sale. The function of the *All-India Khadi and Village Industries Board* is to advise the Government on the methods of effecting all-round improvement in the fields of *khadi* and village industries, which have a special significance in the Indian rural economy and through which not only can subsidiary occupations be found for the farmer in the slack season but the evils of uncontrolled and excessive industrialization can be minimized.

Conclusion

This brief survey of various agencies—official and non-official—will indicate that India is making a great effort for the economic development of the country under the First Five-Year Plan. With this object in view, many schemes have been launched to speed up agricultural and industrial production and to train personnel in various fields. During the next few years, if there is no major crisis in the world, India may reasonably be expected to develop into a strong industrial power. She will attain self-sufficiency in food and other essential basic needs, and improve social services so as to improve health and housing; make free education available for the children. Above all, she may be able to provide suitable employment for the very large number of unemployed persons and thus utilize her enormous resources of manpower for development. This would, in many ways, be the crucial test of the success of all her schemes of social and economic reconstruction. The increased

[11] *Harijan*, December 5th, 1953.

political consciousness generated amongst the people through education and participation in the mass political struggle have given them a keener realization of their basic needs and rights, and any social order which fails to satisfy them is laying up troubles for itself.

In the past India has always laid great emphasis on what may be called the values of the spirit. Will industrialization shift the emphasis from spiritual to material values of life? It is difficult to predict the future course of events, but there will, no doubt, be some shift, which is inevitable in the world of to-day. There is a reasonable hope, however, that her genius and rational temper will enable her to achieve a synthesis between science and religion; between material and spiritual agencies. While India must make use of machinery, she will not sacrifice the growth of human personality at the altar of industrialism. Cottage industries and large-scale industries, small villages and large towns, may co-exist and together meet the economic and cultural needs of the people. The heritage of Mahatma Gandhi is a vital element in the situation, and while it is not yet in full use and there is questioning of some of its basic ideas in some quarters, it is bound to play a significant part in the development of Indian ideology. The movement of Acharya Vinoba Bhave is a case in point for, as already pointed out, it is trying to solve, with some measure of success, the very difficult problem of the equitable distribution of land, without the use of violence or compulsion. Considering the cultural and spiritual tradition of India, it may perhaps be permissible to venture the presumption that India may again be able to make a contribution to some of the problems and contradictions with which an industrial civilization is inevitably confronted.

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CHAPTER FOUR

THE INEP RURAL SCHOOL PROGRAMME OF BRAZIL

[ONE of the commonest characteristics of technologically underdeveloped countries is their lack of an adequate tax-supported school system. The greatest deficiencies usually appear at the elementary school level, and in rural areas. It is very improbable that merely expanding the existing school system, with no accompanying reform in the quality and the objectives, would solve all the manifold educational problems of such an area. But there can be little doubt that increased educational facilities, even of a traditional type, will markedly assist in the solution. When this expansion is accompanied by a thoughtful reform in the type of fundamental education offered, by a marked improvement in the quality of teaching, and by a basic shift in public attitude towards education, then the incorporation of the tax-supported school system into the programme of economic and social development of the area becomes of paramount importance.

Such a programme was that of the *Instituto Nacional de Estudos Pedagógicos* (INEP), a section of the National Ministry of Education and Health in Brazil. This organization was founded and originally headed by Brazil's most famed educational philosopher, Dr. Lourenço Filho. Following World War II, when Dr. Lourenço Filho became National Director of Education, he was succeeded by Dr. Murilo Braga, one of the most brilliant and energetic of the younger educators of that country. There was available a very considerable sum of money, the National Fund of Primary Education, made available under Decree-Law No. 4,958 of November 14th, 1942. This fund had been established at a time when Brazil was still facing the serious war-time problem of subversive education given in clandestine schools to the children of unassimilated foreign population islands or nuclei—principally German, Japanese, Polish, and Italian. Because Brazil's elementary school system is a state rather than a national one, many of the states had found it economically impossible to give a level of free education adequate to attract the children of such foreign groups in competition with their own, and frequently subversive, private schools. This fund was to be a form of national equalization fund to assist local efforts in such foreign nuclei, in sparsely populated rural areas, in federal territories, and along the international frontiers in the in-

terior. Dr. Murilo Braga became head of INEP. Under his leadership there was designed and executed one of the most remarkable programmes of rural school development yet accomplished anywhere in the world.

Dr. Murilo Braga was killed on April 29th, 1952, when the giant Pan American Stratocruiser *El Presidente* exploded in mid-air, 18,000 feet above the jungle. With his death, Brazil lost one of its most remarkable personalities, and the world lost one of its greatest educators. The INEP rural schools, nearly 6,000 of them, stand as a material monument to his work in every part of his country. The following description of this programme was prepared by Dr. Robert King Hall, who worked intimately with Dr. Braga on the project.

THE EDITORS.]

BRAZIL in 1946 faced three obvious and disconcerting deficiencies in its rural education: it lacked school buildings and the physical resources of education; it lacked adequately trained teachers; and it lacked a programme which met the needs of the rural areas.

A survey conducted by the *Instituto Nacional de Estudos Pedagógicos* revealed that in 360 municipalities there were no buildings at all specifically designated for school use; that of 28,302 elementary schools which actually existed in Brazil, only 1,780, or about 7 per cent., were owned by public or government agencies; that of the estimated 6,700,000 children of elementary school age, only 3,200,000 were matriculated; that of this number, 18 per cent. did not in fact attend school. It was shown that of 1,000 children of school age, 460 had never gone to any school; 98 were matriculated but did not attend; 183 left school at or before the end of the first year; 83 left at or before the end of the second year; only 174 actually finished elementary school (which varied from state to state but was usually only a five-year course); and that 33 finished secondary school. This latter figure is highly significant in assessing the potential talent available for the technological development of Brazil—for it represents about 3·3 per cent. of an age-group who finish secondary school and are presumably prepared for integration into the productive economy of the country, as compared with about 86 per cent. currently so prepared in the United States.

The problem of insufficient and inadequately prepared teachers for rural schools is certainly not limited to Brazil, but is a common characteristic of technologically under-developed countries. Three causes were immediately apparent: the salaries paid were tragically low; there was a distinct shortage of all normal schools and a virtual non-existence of schools specifically for the preparation of rural teachers; and social mores made the employment of young, single women teachers in rural areas practically impossible. In one rela-

tively wealthy north-eastern state, for example, the average monthly salary of a rural school teacher was less than the rental of a single room in a second-class urban hotel for a day: about 35 per cent. of the average industrial wage for a day in the United States, or about the equivalent of eleven hours of work at the average industrial wage in Great Britain. Of the approximately 550 normal schools in Brazil, more than half were privately owned and operated by religious orders, and practically all offered a curriculum based on the traditional normal school of France, with its heavy emphasis on the humanities and languages. Significant also was the fact that the vast majority were urban, drawing their students from urban communities, and hence graduated teachers quite unfitted to harmonious living in the conditions actually obtaining in rural areas. The few rural candidates who came to the cities to be trained tended to have their horizons so expanded that they became discontented and estranged from their communities when they returned to the country. Many also refused to return, or resigned their rural positions as soon as they had complied with the minimum teaching period required in payment for their education. City graduates who went to the country found themselves unhappy, rejected, quite incapable of coping with the problems, the social organization, and the psychology of the rural and frontier areas. And few respectable families would permit an unmarried daughter to teach in a rural area unless she could live with some relative of the family. As a result there was a preponderance of male teachers; but because of the extremely low salary, quite inadequate to support a family even in penury, male teachers were frequently failures in other pursuits who had turned to teaching in desperation.

The programmes of the existing schools were quite inadequate to the needs of the rural community. They tended to be very poor imitations of the urban programme: with heavy emphasis on the traditional skills of reading, writing, arithmetic, and simple notions of history and geography. There was no attention worthy of the name paid to the matters of local public health, agriculture, home industries, or the practical aspects of local government. Literacy is a valuable skill, but its value to a rural area in a country like Brazil can be easily over-estimated. Lacking newspapers, libraries, more advanced levels of schools, or an economy which gave a practical financial value to the skill, rural Brazil tended to discredit literacy, and hence traditional elementary education. Literacy had some value in the eyes of the peasant as an index of social status. It could not compete, however, with the informal education of their children in the fields, in terms of meeting the daily problems of earning a living. The rural public was relatively indifferent to the school where it did exist: looking on it somewhat as they did on a railway station or a post office, something the government had given, but nothing which deeply touched their lives.

The Building Programme

The INEP programme centred about a rural school-building project. Its remarkable success hinged on the fact that it was truly an indigenous effort, based on a profound knowledge of Brazilian rural psychology and social organization that no foreign consultant could have acquired. It involved four distinct elements: the semi-standardized design of school plant and facilities; a method of financing based on need, and on ability to carry out the effort locally; the creation of local incentives through the establishment of obviously successful models; and the continuous evolution of an experimental programme.

Historically, most school buildings in Brazil had suffered from a basic failure in design. They were anything but functional: usually elaborately ornate, with enormous costs of maintenance and repair, with heavy emphasis on certain features of a prestige value such as magnificent but little-used auditoriums, pretentious waiting-rooms, and offices of the director. The truly functional part of the school suffered; with small, dark, and overcrowded classrooms; rudimentary hygienic facilities; totally inadequate playgrounds; and a complete absence of gardens and fields where practical work in agriculture might be conducted. The INEP programme reversed all this. It designed a standardized one-story building which was constructed in units that could be multiplied endlessly as population increased. It adopted as its basic design—to the dismay of Brazilian traditionalists, but to the ultimate success of the programme—the most successful form of functional architecture yet devised in Brazil, the ancient *Senzala* or slave-quarters of the colonial period. It is similar to California-Spanish design, was cool, simple, easy to build and repair with local labour and materials, and aesthetically suited to the country.

A single classroom unit, the basic design, was connected by a covered and paved breezeway with a home for the teacher. This home included a living-dining room, two bedrooms, a kitchen, and a bathroom and toilet. It was designed to be as modern as was possible in the area located: with sewage disposal by septic tank or chemical toilet, with electric lights wherever possible, and with running water and a modern stove using the locally available fuel. Both the school and the teacher's home were specifically designed to be the best available in the community, but not to be too much better than the surroundings: so that it would incite, not envy and despair, but rather competition and imitation. As an essential part of this policy, the location of the school was always determined by INEP, not by the local authorities, as a condition of granting money for its construction. And INEP always deliberately selected a place of prominence where the school would stand out aesthetically as a landmark in the region: and for hygienic reasons, near but not in a

village. INEP did not supply the land for the schools' sites, but required local authorities or private citizens to provide it, again as a condition of the grant. And as a matter of policy, INEP insisted that every school have playgrounds, gardens, and a major piece of land attached where practical classes in agriculture might be conducted.

As has been mentioned, Brazil has a state system of elementary education, with individual schools under the direction of local offices of education in the various municipalities, but supervised and partially financed by the various state offices. It was no part of the INEP policy (considered highly desirable for political and social reasons) to alter this, but to strengthen the decentralization by making possible, but not obligatory, the efficiency of education. The system of contracts for the construction of rural schools was a necessary element in the policy.

By law, the municipality supervised the construction, maintenance, and repair of its schools; the state office of education received, distributed, and maintained fiscal accountability of all funds for education in that state; and the INEP distributed the moneys from the National Fund of Primary Education in amounts which its field research indicated were necessary in any particular area or state. The INEP did this through individual contracts for the construction of individual schools at pre-determined sites. When such a contract was made, and the money transferred to the credit of the state authority, a telegram was sent to the local municipal director of education advising him of the details. This, in effect, established a three-way vested interest in every individual school, and ensured a three-way supervision of the spending of the funds. It also, and this was important to the success of the programme, made it virtually impossible for any serious graft to occur, since no official or agency had independent control at any one time over a sum greater than the cost of a single school unit. The INEP accounts were under the immediate scrutiny of the Cabinet of the Federal Government; the various state offices, in order to graft, would have had to secure the connivance of scores or hundreds of local municipal officials—a practical impossibility; and the local educational office was restricted by the conditions of contract, the semi-standardized design, and an inspection of the physical plant on completion of the unit. The amount of money paid for each school was carefully calculated so that it would just be sufficient for the cost of construction in those relatively advanced states where a high degree of efficiency, and a higher unit cost of construction, might be expected: but would allow a reasonable latitude in those more backward states where there was a lack of efficiency, but a compensating lower cost of construction. The practical success of this adroit policy may be judged by the fact that with the barest minimum of formal fiscalization by the federal agency, more than six thousand units were constructed,

scattered over every part of the country, without the slightest evidence of graft or of scandal. If any misuse of funds occurred, it was limited to the relatively insignificant loss caused by an occasional local contractor who did not wholly meet specification requirements.

A similar long-standing and vigorously protected policy of Brazilian education is the maintenance of local, or at most state, control over the curriculum and internal administration of the schools. Here, too, the INEP programme strengthened by federal action a basically decentralizing policy. The INEP could not, and had no wish to, *force* upon any locality a change in its traditional curriculum. But it could indirectly *inspire* such a change by supplying experimental gardens, fields for agricultural classes, the services of travelling agricultural specialists or farm agents, the tools, seeds, and marketing co-operatives for produce resulting from such classes. The result was inevitable: where there had been no sports, the new playgrounds inevitably produced sports; where there had been no agricultural or practical work in public health, the fields and gardens and improved hygienic facilities introduced new classes and new interests. The old stereotyped curriculum was changed, not by federal edict, but by the growing awareness of the entire community—parent, child, and teacher—that these new areas of learning were good.

This impact upon community attitudes was not confined to the school curriculum. Farmers who had passively resisted all efforts to change their agricultural practices for decades, began to adopt methods which were taught in the schools, and which produced demonstrably greater yields. The architecture of new homes and even public buildings of the villages began to show the influence of the schools. Local contractors began to adopt construction methods and accounting on their own jobs which were the same as those required by INEP. Local officials took pride in being a part of a major national programme, and gained extremely useful experience in administrative practices and leadership. And above all, the community attitude towards the employment of unmarried female teachers underwent one of the most remarkable changes to occur in modern Brazilian life. From being a profession without status, barely respectable, for the young woman, it became one of the favoured vocations. The teacher's home was the instrument of this change. It was the best in the rural area. It had a second bedroom where an old family servant, or a member of the family, might live and thus satisfy the mores of rural respectability. The modest salary, inadequate for the head of a family, came much nearer to being adequate for a single woman, and might be substantially augmented by the production of the school garden and farm. In a period of six years the programme produced a revolution in rural teacher employment, and changed an overwhelmingly predominant male teaching staff to one over 90 per cent. female.

The INEP programme was never intended to remain static. It was specifically committed to a policy of experimentation, change, and advance. Brazil, although one of the oldest nations of the New World, is also in modern times one of the most dynamic: it is going through a feverish social revolution and process of industrialization. Even basic problems change from year to year. As new areas are opened up, better roads built, cities spring up where ten years ago was untouched *mato* or *sertão,* Brazilian education must make rapid and appropriate changes to meet the new needs. The INEP was therefore constantly experimenting with new types of schools, new programmes. Two of the most interesting, unfortunately interrupted and perhaps ended by the death of Dr. Murilo Braga, were those of a boarding school near Sergipe: for children of migratory river workers and fishermen; and an adaptation of the American-type consolidated school for children of workers on the sugar plantations in Aracaju.

The Teacher Training Programme

One of the most difficult problems of the entire INEP programme was that of finding suitable teachers for the new schools. Only a small proportion of the then practising rural teachers were adequately trained, or could be fitted for the new curricula by intensive in-service training. The INEP adopted a policy of recruiting able young people with some teaching experience and then retraining them for INEP schools in special teacher training courses. A five-point policy was adopted. The candidates were selected, on a competitive basis, from rural areas, so that they would know intimately the way of life of the community to which they would return as teachers. They were selected from among young people, so that their period of service would be long and their teaching methods would still be flexible. The training would be carried out in a rural area, and not in a city, so that the candidates would not become contaminated with metropolitan life and discontented with their lot in the interior. The students would be encouraged by an imposing array of incentives, chief of which would be continued opportunity for advanced study and rapid promotion in their own profession. And the daily existence of the successful candidate when actually teaching in a rural area would be made as pleasant as possible by such benefits as short-wave radios, broadcasts of teacher-aids and cultural programmes from the Ministry of Education, compressed school weeks that permitted periodic extra-long week-end leaves—so the teacher might visit her family—and travelling libraries.

Since the states were relatively autonomous in their elementary educational systems, it was both impossible and undesirable for the INEP to licence teachers for rural schools, even for those financed by the INEP. But the federal agency could prepare a pool of well-trained candidates for local or state licensing. This was done by

two methods. Forty-five rural normal schools, capable of enrolling six hundred and sixty students each, were constructed in key rural areas, for the training of student teachers in skills considered desirable by the INEP. While these schools were in process of construction—and hence not supplying the rapidly completed INEP rural schools—a series of seminars was held for young but experienced rural teachers in various parts of the country, to train them in the new techniques and attitudes. Since all of these people were country-bred, they already knew how to live and work in the interior. The INEP programme was designed to teach them how to do it better, so that they would lead, not merely fit into, the rural society.

Another training programme, however, was established by the INEP in an effort to create leaders in rural education from among the rural teachers themselves. A group of most able younger teachers, competitively selected from all parts of rural Brazil, was brought to the capital for a six-month intensive training course. They were taught techniques, a certain amount of theory, and advanced work in subjects with which they were already familiar: art, handicrafts, library science, agriculture, public health, civics, and government. But the real purpose was to awaken them to their own importance in the future of Brazil, to build up their self-confidence, to instil in them a certain measure of 'missionary zeal' for the work they were doing, and to open their eyes to the social implications of their new form of teaching. Successful candidates of this course were required to return to their own community for not less than two years to repay the government for its investment in their education. A measure of success was that of the approximately three thousand five hundred teachers thus trained, only a minute fraction had to be required to meet this condition.

Two additional teacher training programmes were under consideration at the time of the death of Dr. Murilo Braga. One was a proposed higher rural normal school to be established in the outskirts of Rio de Janeiro and to take over and expand the work of the six-month seminar mentioned above. The other was a programme of overseas training for competitively selected leaders among these graduates, after a period of practical work in the field. It was hoped that a programme could be established in a major American university which would give these highly selected and experienced rural school teachers the thorough professional equipment, and the prestige, that would enable them to become real national leaders in education.

Achievement

The INEP rural school programme had been in existence for slightly less than six years at the time of Dr. Murilo Braga's death. In that time it had trained 3,500 teachers, established 45 rural normal

schools, constructed approximately 6,000 school units with homes and experimental gardens or farms attached, begun work on five experimental schools, and fundamentally influenced rural Brazilian sociology and education. One of the most significant achievements was the sheer speed with which the basic problem was met and solved. With the exception of a single part-time foreign consultant, the entire programme was Brazilian staffed, Brazilian financed, Brazilian conceived and executed. By January 1950, when the building programme had been under way for only two and a half years, the record of INEP was: 2,250 rural schools finished, 2,110 under construction, 1,800 authorized, sited, and financed; 55 consolidated schools finished, 65 under construction, 100 authorized and financed; 25 rural normal schools under construction, 20 authorized and financed; 12 rural secondary schools begun; one experimental school for fishermen authorized, financed, and begun.

What will be the future of the programme? Brazil, like many other technologically under-developed countries, has suffered from a lack of continuity in its educational policy by a change of leadership. It has become almost traditional for the newcomer to discontinue, sometimes even to discredit, the work of his predecessor: to start with a 'clean slate'. Many parts of the INEP programme are under new direction, many elements of the educational philosophy which inspired it are not entirely accepted by the present leadership, and the very problems of dynamic Brazil have shifted and changed. But the impact which six thousand schools and three thousand five hundred trained rural leaders have made upon Brazilian society, and the example the programme has offered to other nations facing similar problems, is an achievement which will be lasting.

Robert King Hall.

CHAPTER FIVE

THE ROLE OF THE ROMAN CATHOLIC MISSIONS

THE aims of any missionary body are, of course, primarily religious, and in most cases school education is only a part of, or a secondary feature in, a general programme. But any attempt to indoctrinate native peoples with Christian teaching will in itself involve basic education of a kind which may or may not be already latent in native ideas: education in charity, in discipline and self-control, in sacrifice, care for one's neighbour, and so on. Love of one's neighbour lies, or should lie, at the basis of all schemes of welfare, and forms a groundwork without which it may prove impossible to improve social conditions. Hence the difference between the so-called primary and secondary aims of mission bodies is not so great as it appears at first; although the main directive may be "to preach the word of God to the entire people" the means taken to achieve this result, and to maintain converts once they have been made, are bound to be educational in the widest sense. The aims, as set out in the directive of a typical and widespread Catholic missionary body, are to train the priests, through a study of the native languages, customs, and religions in their historical and social background, so as to be able to understand the people, and ultimately to enrich the partial truths already to be found in native ideas and customs with the deeper truths of Christianity. The missionary "must know the content of truth in paganism—what is common between pagan and Christian truth (for truth is one, and must be respected wherever found)."

With this training behind him, the missionary should try to win the confidence of the people, first by his interest in and respect for their customs and traditions, and then by schemes of welfare and charity which should be in harmony with native customs. At the same time the Catholic priest, more perhaps than his non-Catholic colleagues, must preserve the dress, outlook, and status of a priest at all times. From this point onwards the aim is to train natives to carry on all branches of the work: catechists and ultimately priests for the more purely religious work, native women to take charge of maternity and child-welfare clinics, run first-aid centres, act as district nurses, and so on, and both men and women to teach in

primary and secondary schools and teacher training colleges. Mission stations, with all that they involve in the way of education and welfare, should eventually become self-supporting. It is important to notice that the missions understand very well that schools are by no means the only vehicle of education: that plays, sports, music, discussion circles, clubs, newspapers and so on are in fact as important, if not more important. " It is through all these movements and organizations that the body of our people at home are truly educated, and not through the schools as such." Education, therefore, must be thought of throughout in the broadest possible sense.

The Catholic missions start with some advantages over their Protestant brothers, and with some corresponding disadvantages. In the first place, the field upon which they can draw is a cosmopolitan one, and they are also a body of people under orders, who can be sent anywhere, and are vowed to poverty, celibacy, and obedience. Certain orders, too, have lay-brothers associated with them, who are able to engage in such tasks as agricultural and technical instruction, for which the priests, by reason of their religious duties, may have insufficient time. These initial advantages are sometimes outweighed by corresponding disadvantages: in many mission-fields, as happened in Nigeria, for example, in the early days of the Society for Missions to Africa, the nationality of the missionary raises a linguistic barrier, which adds to the difficulties both of teacher and of taught. This is true of many areas even to-day. Again, for the natives of many pagan countries celibacy is a completely new and unnatural idea, while poverty is an age-old disease from which they only now see the possibility of escape, and which they cannot conceive of as a virtue. Celibates vowed to poverty may then at first be regarded as objects of contempt; or, more commonly, the better diet and clothes of the missionary seem to the native at variance with what he would call poverty. Celibacy is in some areas an obstacle to the recruitment of native clergy, as are also native customs connected with large families, which impose contingent duties of financial support on all the male members.

These are some of the advantages and disadvantages peculiar to Roman Catholics. Other difficulties have been and are common to all the missions. We have mentioned the fact that education is by no means confined to the schools: nor is it confined to the educational efforts of mission and government together, even in the widest possible sense. The material and moral standards of the white settlers—or, in tropical countries, of the temporary sojourners—their obvious preference for professional, clerical, and commercial occupations, their attitude to the native, their films and newspapers, may well do more to influence literate and illiterate opinion alike than anything which the missionary teaches, particularly if what he says is in marked contrast with the behaviour of the settlers. In countries

where change is taking place rapidly, the demand for educated natives is often so great that the mission schools (always understaffed and overworked) are practically forced to choose between cramming for examinations and the proper teaching of religion and conduct. These are some of the difficulties which may arise on the side of the Europeans.

Native Resistance

Difficulties on the native side arose particularly in the earlier days, and it is a measure of mission achievement that some of them should be disappearing. Until quite recently, in countries where there was no indigenous system of education, it was often quite impossible to persuade natives that any form of schooling, which removed their children just when they might be earning or helping in the house, was of any value. In Muslim territories the fear of Christian influence on children made resistance to any but Koranic schools very strong; only social and economic pressure—the need for a new type of education to enable children to take advantage of new opportunities in industry and commerce—was able gradually to break down the prejudice against ' foreign ' schools. In all countries where the climate allows a basic livelihood to be won very easily, there is a natural indolence which leads to irregularity of school attendance and lack of concentration; the story of how, when the price of a product increases the output decreases till the man is earning what he earned before, is told of the nineteenth-century African as well as of the mediaeval Englishman. There is also a total inexperience of the need for regularity and punctuality, while home duties and distractions continually divert the attention of pupils. All this was also characteristic of the early factory systems in Europe, and from the point of view of commerce and industry the gradual disappearance of these difficulties is one of the indubitable benefits of mission training. The habit of regular and punctual attendance at school, and the development of habits of concentration, are invaluable for later work. Another reason for ' laziness ' and unreliability, however, and probably in many areas the most important, is malnutrition, and against this the fight has only just begun: indeed, its importance has only recently been recognized. In connexion with this there is a further problem: whether because of European example, or whether because (as in some parts of Africa) manual labour is associated with slavery, or whether it is a simple matter of observation that agriculture is less immediately profitable and harder work physically than (say) commerce, what used in earlier days to be called *industrial schools* have never been popular; book-learning is the only kind of learning for which there has been any demand. The reluctance of natives to attend schools at all, and in some areas, during the early period of government assistance, the effect of the payment-by-results system, has made it

necessary to teach what was in demand, for fear that attendance should fall. In Nigeria, for example, despite the heroic efforts of the Catholic missionaries to found an agricultural *settlement* at Topo near Lagos, all—though a big ' all '—that came out of the long and difficult experiment was an agricultural *school,* which did in the end begin to affect the standard of agriculture of the neighbouring areas. The Nigerians working at Topo were as anxious as any white agricultural labourer for the delights and amenities of town life, and there was a steady trickle back to Lagos. The preference for white-collar work and for town life obviously creates a vicious circle, since malnutrition can be alleviated only by improved agriculture, and agriculture can be improved only when sufficient natives will devote themselves to it. It may be, however, that the incentive must come from the top, and that the agricultural departments of some of the new colonial university colleges, by giving 'book' status to agriculture, will attract natives at the top level, and from there interest and enlightenment will spread down to the villages.

Another reason for the lack of enthusiasm for industrial and craft training has been in many countries the strong traditions of apprenticeship in family businesses; there a boy would receive a much better training than at an industrial school whose alien teachers could not help making a break with native crafts. For this reason departments of public works and other government departments, by making use of apprenticeship, have often turned out better craftsmen than any school could have done.

It is obvious to anyone who has had experience of teaching students of varied colour that there is no intrinsic difference between the intellectual abilities of different races: the difference, and it is still a great one, is a difference of training; it affects, as we have said, punctuality, regularity, concentration, reliability, conscientious capacity to work alone, love of work for its own sake. In overcoming these things, as far as the health and constitution of the native peoples will allow, the work of the schools cannot be over-estimated. Yet there is still in many countries, for instance, a lack of the foreman class, and in such matters as building and maintenance of roads, railways, and bridges, unless reliable natives can soon be substituted for Europeans, the work will not be done, or, if it is, it will be financially crippling. It is, however, natural that in any community where the native is often made to feel inferior to the foreigner (or at least made to feel how backward he is) he should resent any attempt to make him confine himself to manual labour (even as an overseer) as a deprivation of his rights, or just another way of expressing the white attitude that the native is fit for nothing else.

Influence of Education

In countries where there is no indigenous educational system or where, as in Muslim countries. the education system is in no way

vocational, education as introduced by the missions cannot avoid being an instrument of change. The educated native, however slight his education, feels himself above his fellows; he begins to develop ambitions and to have a different scale of wants. In spite of the earnest and continued attempts of the Catholic missions to preserve tribal life and native customs, contact with European ideas and standards is bound (like the discovery of pagan America to sixteenth-century Christendom) to be unsettling. How much this is, despite all precautions, the result of mission schooling, and how much simply the presence of Europeans in the areas concerned, plus the normal attractions of town life, it is impossible to estimate; what is certain is that nearly everywhere there has been a widespread break-up of customary ways of life, de-tribalization and drift to the towns, often accompanied by a loosening of moral standards. This upset some of the early missionaries so much that they began to doubt the whole value of education; but it is likely that Catholic mission schooling and influence have acted rather as a brake than as an accelerator. All this poses new problems for the missions, in the shape of pupils and adherents from different tribes and localities, with different standards and traditions; it also increases the need for a common language (often English), and ultimately, by breaking down internal tribal and racial barriers within a country, may make external standards more acceptable. Where radical de-tribalization has occurred, the task of the missions is very often no longer to bolster up the better features of tribal and customary morality and supplement them with Christian teaching, but rather to fill a complete void with the new ethic and new rules of conduct. Here the problem is not only one of teaching reliability and responsibility; it is the same problem as exists in post-Christian areas in Europe—that of actually creating Christian characters out of intractable material. But everything has its compensations: the material may be more volatile, but the de-tribalized native often thinks more quickly and is more ready to absorb new material; while less stable, he often seems more intelligent and lively than his up-country brother, and his contact with settlers and with completely urbanized natives will stimulate his desire to learn and to get on, at least materially. To see that his ambition also has a spiritual content is the task of the missions.

Economic and social factors play a great part. One of the major problems, from the economic point of view, is that a native in his own environment is usually completely satisfied by a subsistence economy—or at least, for various reasons, he seems to make no effort to change it. He has often no conception of laying out even the smallest amount of capital for something which does not show an immediate return, while the idea of acting for the benefit of the next generation would not occur to him—why should it? As in the European Middle Ages, the customary standard of living round

about him, with the customary prices and wages, will appear normal, and his wants will be those of other comparable people in his static community. While there is something almost idyllic about this picture, the attitude of mind has to be broken up before any economic or social progress can be made, and it is part of the mission's work to inculcate these things through the encouragement of thrift and thought for the future, support of churches and schools, co-operation in welfare as a community, and so on. From one point of view the role of education is that of creating wants—it should make the native not only a better producer but a better consumer; the special task of the missions is to direct both production and consumption into wiser channels. The impact of a more wealthy society on a primitive one is bound to engender a materialistic outlook in the native: he thinks in terms of getting on quickly and being as rich as the white man. This can be attacked in many ways, in its more undesirable aspects; in West Africa, for example, the Catholic missions are associating themselves energetically with those who are attempting character-training through sport. It may be that in the West amateur sports are on the downgrade, but they still have a great role to play as an educational force among (for example) West Africans, where the mercenary spirit engendered by the towns threatens to become rampant in the field of sport. Public-spirited Africans and Europeans, among whom some Catholic priests are prominent, are trying to encourage simple ideas of sportsmanship like ' playing the game ' and ' the game for its own sake and not for victory or the prize ' which may be of fundamental use in character-building. Here is only one example of the wide field over which ' education ' has to take place; and it is interesting to note in passing that sport is a field where interracial tension is least, even in difficult areas. Mention might be made, if space allowed, of many similar activities, such as scouting and music.

Finance

Throughout the whole history of the Catholic missions runs the theme of shortage of money; they seem to have been generally less wealthy than their Protestant neighbours, and, when one looks at the early days of government assistance, the minuteness of the sums contributed seems almost unbelievable. Things have improved a good deal in most parts, but the low standard of living of the average native makes (for instance) the hope of making mission stations self-supporting, so often expressed in the early days, still very remote. It is difficult for a native, who knows that the missionaries come from wealthy countries overseas, to grasp why he should contribute anything. Something analogous to the Englishman's feeling that the social services are a ' right ' has grown up in many mission countries, both in relation to the work of the missions themselves and more recently in relation to the provision of facilities

for education, scholarships, and so on, by the various governments. This remains, and will remain, a very difficult problem, even when schools and parishes, and perhaps even universities, are largely staffed by native-born teachers, clergy, and lecturers. (Perhaps this is the place to mention what I believe is the only recent Catholic venture into the university world in a mission country—the university of Roma in Basutoland—founded by the Canadian Oblates of Mary Immaculate. This illustrates one of the advantages of the Catholic missions—since the cost of founding universities to-day is becoming rapidly prohibitive for non-governmental organizations, except where the teaching can be mainly done by a religious order.)

The field which was at one time occupied by the missions alone is now full of lay endeavour, from the primary to the university level; while all kinds of organization—governmental, semi-political, and religious—are working to combat illiteracy on a large scale, and public relations officers, newspaper owners, and cinema proprietors vie with one another for the attention of those who have just become literate. It is no longer possible—if it ever was in more than individual cases—to disentangle the results of mission work from that of the general intellectual climate of any mission country. The intellectual climate of Britain as a colonial power is clearly post-Christian, and it must be peculiarly confusing for a native, who has been stirred out of his paganism by one brand of Christianity, then comes into contact with different brands, and is finally confronted with the prevailing non-religious outlook. As the demand for education becomes more intense and more widespread, it may be that government will take over more and more of the obviously educational activities, and that the missions will be thrown back rather on religious teaching and welfare work. But this seems unlikely for a considerable time, since the demand for expatriate trained educationists can be satisfied only if there is a large number of people with missionary vocations.

BERNICE HAMILTON.

CHAPTER SIX

THE ANGLICAN CHURCH

In the ultimate analysis there can be only one purpose for the missionary activity of the Christian Church, and that is to obey the explicit command of Jesus to His followers to " preach the gospel to all nations ". That purpose inevitably underlies and affects the various forms which that missionary activity can take. " Our main business ", wrote one who laid the foundations of a Christian community life in a primitive part of West Africa, " is not to pass on hospitals, schools, the making of roads, the training of mothers, the care of children, or even the ' Word of God ' unless these things are not ends in themselves but means to a greater end, which is the sharing with others of Christ's risen life." Nevertheless, those who have been responsible for shaping the missionary policy of the Anglican communion and other branches of the Christian Church have always realized that ignorance and poverty are not only obstacles to the preaching of the gospel, but are in themselves repugnant to the Christian conscience. Though the emphasis on much of the early missionary work was upon the removal of ignorance, those who were most active in the field of education were not blind to the need for a parallel development of the social and economic conditions of the people among whom and for whom they worked. " Poverty and ignorance can abide together for centuries; poverty and education form an explosive mixture." The assistance which missionary agencies have given to the development of the under-developed territories has, therefore, been very considerable; indeed, it would not be an exaggeration to say that the progress made in many of these territories would not have been possible without the original work of Christian missionaries, perhaps a century or more in the past.

Aims and Policy

In a short article it is difficult to distinguish between the activities and achievements of the Anglican Church and those of other Churches. The main purpose of all has been similar, and the methods, though different in detail, have been fundamentally the same. Moreover, some of the most effective work in social and economic development has been the result of a partnership between the Anglican Church and some other Christian body. The Anglican communion would not wish to claim any special excellence, though

it takes a modest pride in the fact that its missionaries have always cared deeply for the full development of the people to whom they took the gospel. Thus, in 1817, the missionaries of the Church Missionary Society who were opening up work in Freetown described their aim as follows: "The introduction of civilization, educating the young and ignorant, distributing the Scriptures and other books and preaching the Gospel." The earlier documents of the Society for the Propagation of the Gospel, the oldest of the Anglican societies, provide no such specific definition, but the Society from the very outset clearly saw its work in the same way. When the Universities' Mission to Central Africa drew up its first constitution in 1859, it set out its purpose in words which are a typical expression of the aim of all the missionary agencies of the Church of England: "The object shall be the establishment of stations in Central Africa which may serve as centres of Christianity and civilization for the promotion of the true religion, agriculture, and lawful commerce, and the ultimate extinction of the slave trade. And in order to carry out this project successfully it is proposed to send into Central Africa six clergymen, to be headed as soon as possible by a Bishop, and also a physician or surgeon and a number of artificers, English or native, capable of conducting the various works of building, of husbandry, and especially for the cultivation of the coffee plant." One is reminded of the words of Livingstone: "In the glow of love which Christianity inspires, I resolved to devote my life to the alleviation of human misery." In practice, human misery was alleviated by education, including not only translation but the writing down of unwritten languages, by medical work, by the improvement of agriculture and the introduction of local industries, by the earliest forms of what we now know as community development, and, in a more subtle way, by the stimulation of political consciousness through the creation of self-governing dioceses.

Education

Both in quantity and perhaps in quality the greatest contribution of the Christian missions has been in the field of education. Wherever missionaries went they started schools, and they were the pioneers of Western education in almost every under-developed area of the world. The Commission on Higher Education in West Africa recognized this when it said: "It is a simple historical fact that save for the Churches, now largely Africanized, no one so far has seriously tackled on the grand scale the sheer hard work of West African education." The magnitude of the achievement of the Churches can be seen from the figures of children attending primary schools in Nigeria in 1947; in the schools of the Voluntary Agencies there were 558,191 children, contrasted with only 51,162 children in government and Native Administration schools, and in the total for

the Voluntary Agency schools were included 358,592 boys and girls for whom no government grant was given. The picture is much the same in East and Central Africa, while in India, Ceylon, and Indonesia the foundations of Western education were firmly laid by the Churches. In all this work the share of the Anglican Church has been, and still is, very large. The Anglican Missionary Societies have always given a special emphasis to the development of secondary schools; to take but one example, in Ceylon, where the two Anglican dioceses together have about 50,000 adherents, they have founded and still help to maintain more than twenty grammar schools. In higher education the Anglican Church can claim to have been pioneers, with the foundation of Codrington College, Barbados, by the S.P.G. in 1745, and of Fourah Bay College, Sierra Leone, by the C.M.S. in 1827.

The Report of the Education Study Group which visited East and Central Africa in 1951–2 contains the following passage: " It is the historical role of the Churches to be the trail blazers in any ventures that affect the well-being of people whether in education, health, or the welfare of the young, the old, the handicapped. The Churches have made the initial experiments, have learned how to bring success out of failure, have been able to show the way, and have then handed over their achievements to governments who develop systems from these pioneer efforts. The Churches have then been free to exchange the majority of these kinds of responsibilities for the freedom to undertake new enterprises." In many of the under-developed territories this transfer of responsibility is only now beginning in education, but in medical work the process has gone further. Nevertheless, without the pioneering work of the Churches the cure and the prevention of disease would not have been so far advanced as they are to-day. The early realization of the need for such work can be seen in the will of Christopher Codrington who, in bequeathing his plantations to the S.P.G. to found the college which bears his name, had the purpose of assisting " the study and practice of Physick and Chirurgy as well as of Divinity "; but medical missionary work began on any large scale only in the nineteenth century. It is not without significance that four of the Anglican bishops overseas in that century were also physicians or surgeons. By 1885 the S.P.G. was engaged in medical work in India and Palestine, and the C.M.S. in Iran, India, and China. The contribution made to the 'backward' areas by such men as Sir Henry Holland, the great eye-surgeon of the North-West Frontier, and the Rev. P. S. Drewe, priest and doctor at Holy Cross Hospital in South Africa, can hardly be over-estimated. Pioneering work was done also in medical education, for it was the mission hospitals which first started training nurses, dispensers, and medical assistants. A medical school was established at the Mengo Hospital of the C.M.S. in Uganda as early as 1913.

Agricultural and Technical Development

The early missionaries, as has been suggested already, were quick to see the vital importance of agricultural improvement and technical training, and, in spite of their very limited resources, they took the initiative long before governments had started agricultural departments. This pioneering work still continues, and in recent years the Anglican Church has been responsible for important experiments, of which the work of Mr. K. H. Prior in the diocese of the Niger and of the Rev. D. Stowell and Mr. G. Clutton-Brock at St. Faith's, Rusapi, in Southern Rhodesia, may be taken as examples. In 1938 the Niger diocese decided to give more attention to the needs of the rural community at a time when Eastern Nigeria was still in the depths of the depression and the price of palm-oil had fallen from ten shillings to ninepence for a five-gallon tin. The first object was to convince the villagers that agriculture still " held out hopes of improvement and of a good life ", and this was done through the students at the church training colleges for ordinands, teachers, and catechists, and through members of the various church councils. The diocese gave strong support to the Nigerian government's new syllabus for schools based on rural science, which was not immediately popular, and experimental plots were started to show the possibility of continuous cultivation and the value of compost. Such was the success that one bishop complained that he could not visit a church compound without falling into a compost pit! Seeds, plants, trees, and breeding stock were supplied, with government help, and encouragement was given to schools and churches to combat erosion and beautify their own compounds. The final step was the establishment, in co-operation with two other churches and with a large grant from the government, of a large rural training and demonstration centre to train a large number of workers to go round the villages and help the people to improve their agriculture. In this instance the Church supplied the desire and will for improvement without which no government scheme, however well conceived, can hope to succeed. By itself it never claimed to meet more than a fractional part of the need of Nigeria, but the work which the diocese did was of lasting value, not least as a forerunner of community development.

The pioneering work at St. Faith's, Rusapi, is of a different kind. Here the Anglican diocese owns some ten thousand acres of farm land, at the centre of which is a small common farm with one hundred acres under plough, practising mixed farming. The purpose of this farm is to feed the mission and its school, to develop African village agriculture on a small-holding basis, and to show how co-operative farm work can be organized. What is really distinctive is that all the activities are carried on by Africans and Europeans working together. The combination of sound agricultural practice

and training with the demonstration of racial co-operation shows signs of being significant in the development of Central Africa, though the farm itself is almost pitiably small and ill-equipped.

The Church has also tried to provide the beginnings of technical education and training, before the governments, very belatedly, entered this field of work. As early as 1899 an industrial training school was started at St. Augustine's, Penalonga, in Southern Rhodesia. A number of industrial schools were established in India, such as that for boys at Nazareth in the diocese of Tinnevelly, which has a wide reputation for craftsmanship, and the school for girls at Giddalur in the new diocese of Dornakal. But it must be confessed that the Anglican Church as a whole has, like the other Churches and like most governments, been more concerned with formal academic schooling than with technical and vocational training. This is the more regrettable, as the Church has not always given the lead it might have done in adult education and in community development. It is true that, as the Report of the East and Central African Study Group says, " the Churches, pursuing their evangelical and teaching work, are themselves very powerful agencies of adult education ", but it cannot be claimed that this great opportunity has been utilized to the full.

Political Development

In a less direct way the Anglican Church can be said to have made a great contribution to the political development of many of the territories. In the building up of every diocese there has been the conscious purpose of creating " a Native Church, increasingly self-governing and self-supporting ". This could be illustrated from the history of the Church in China and India no less than in Africa, though in that continent the progress has perhaps been more striking, since ecclesiastical self-government has been ahead of political self-determination. Henry Venn, the great secretary of the C.M.S., wrote prophetically in 1851: " The ' euthanasia ' of a Mission takes place when a Missionary, surrounded by well-trained Native congregations under Native pastors, is able to resign all pastoral work into their hands and gradually relax his superintendence over the Pastors themselves till it insensibly ceases; and so the Mission passes into a settled Christian community." Nine years later, the C.M.S. formed the Sierra Leone Native Pastorate Church, the first indigenous church in any mission area. As members of district boards, ruri-decanal conferences, archidiaconal councils, and diocesan synods, thousands of Africans have learnt the methods of democratic government and received a political training which must have its effect upon the political development of Tropical Africa.

The Christian Church, like all pioneers, has continually to adjust its policy to the changing circumstances for which it is itself responsible. Recently one of the largest Anglican missionary societies has

said of its educational work that it believes that " as the Society has been called in the past to pioneer in establishing Christian education in many areas overseas, so it is called to-day to make a special contribution to the expanding schemes of education which are still of a pioneering nature ". So the Church has taken the initiative in literacy work, as in the joint enterprise of the C.M.S. and the Methodist Missionary Society at Bunumbu in Sierra Leone; it broke fresh ground years ago in the social service work at Srinagar in Kashmir and at Trinity College, Kandy. Though the earlier missionaries lacked the training in anthropology which would have helped them to understand and to adapt local customs, some of the best work in African anthropology has been done by Christian missionaries, and they are still giving a lead in resolving the problems which arise from a clash of cultures. The experiments of Bishop Lucas of Masasi in relating puberty rites and initiation ceremonies to confirmation, the development of African music and drumming at Achimota in the Gold Coast and at Idunda in Nyasaland, may be taken as illustrations of widespread tendencies. The sacrificial loyalty of the Christian Kikuyu in the face of Mau-Mau terrorism has proved how valuable the Christian work of interpretation and adaptation can be.

But when all has been said, it would be a mistake to assess the value of the contribution of the Anglican Church or of any other Christian Church in terms of quantity alone. It is of the essence of that contribution that it should be judged rather by its quality. It has been, and still is, the task of the Christian Church in any land to demonstrate in significant miniature the kind of community in which men and women may live fruitful lives. The devotion of its members and not their numerical strength must be the criterion of the success or failure of the Church's work. By this standard the historian of the future may well judge that the contribution of the Anglican communion and of its sister Churches has been decisive not only in the moral and spiritual development of the people but also in the providing, in part at least, of the effective incentive to the economic and technical progress of the lands in which they live.

R. W. STOPFORD.

CHAPTER SEVEN

CHRISTIANITY AND TECHNOLOGICAL DEVELOPMENT IN AFRICA

WHAT do Protestant missions wish to achieve through their efforts in an under-developed area—in Africa, for example—not merely by schooling provided through formal educational facilities, but by a whole Christian process of guidance to greater moral, aesthetic, and intellectual maturity? How far has Christianity succeeded in this task?

The statement of Christian objectives in Africa has been made in various forms. For the present paper I suggest this formulation: To preach, teach, demonstrate, practise, and thus to share, the fullness of the powers made available to men by God through Jesus Christ.

This is made by one who is essentially a layman, who has studied no theology, but who has been ordained to the Christian ministry as a missionary, in the custom long followed by his Church. The formulation probably does not gain the full approval of all the various Christian confessions and numerous denominations. These latter, indeed, in themselves by their differences seem to many to contradict one another on many things, and sometimes to subvert and controvert certain of the teachings and desires of Jesus as recorded in the New Testament.

Despite these weaknesses—not only of formulation but of action—it nevertheless appears to me that upon Africa the effect, both direct and indirect, of Christianity (not just of Christian missions) has probably been greater than that of any other one influence from the outside in the past three generations.

I am not prepared herein to attempt separate evaluation of Protestant missions in Africa society, nor even of Protestant and Roman Catholic missions jointly. The impact of Christianity in Africa has by no means come only through Christian missions. These impacts have come through many different national cultural, economic, and political channels from the West. Even within the Christian missions those national forces have not infrequently produced quite different attitudes, methods, and results.

The basic thesis of this paper is that religion (in this case Christianity) is not something in a separate compartment of life called church or missions or worship. It is an integral, inextricable

part of life, all life. It is a major element of that holism of which Jan Smuts, Haldane, Whitehead, and others have written. Its impact upon that wholeness of life represented within a tribe by Africa's animistic communal society comes through the whole of the life poured in upon Africa in these later years from the whole of the so-called Christian West. The impact in its action may be named direct and indirect. But in its effect it is a whole and comes from a whole.

Impact of Christianity

The indirect influence has come in three ways. First, from the fundamentally sound bases of much of Western political, economic, educational, and social structure which have been sparked and to an extent established by the Christian philosophy of the worth and power of the individual, of a common Fatherhood, of brotherhood, of freedom linked with responsibility. Second, by the degree, varying considerably, in which Western countries have put these great Christian principles into use in their own societies. And third, by the degree in which these principles have initially and subsequently motivated and guided the Western countries in their political, economic, and other relations with Africa.

I do not venture here to comment on the first two of these indirect Christian influences. A good deal has been written about them in other connexions.[1] But on the third of these three indirect influences, history records that a number, if not all, of the Western societies about to enter Africa put forward humanitarian, charitable, Christian reasons for doing so. The Portuguese first of all, and to this day, avow a high Christian and civilizing motive for entering and staying in Africa. The British were publicly receptive to David Livingstone's call to Christians and the West to cleanse the 'open sore' of slavery in Africa. Britons, Americans, and others may have felt guilty, since they had been so largely responsible for creating that open sore. Slavery of a domestic type there had long been in Africa; and some trafficking with the Near East. But big-scale, trans-ocean, commercialized slavery was in large measure a Western responsibility. To wipe it out was indeed a part of the Christian's responsibility.

It seems clear that the political, economic, prestige, and power urges to enter Africa were considerably reinforced—and made more palatable—by the sense of Christian mission. However mixed the motives were, the Christian ideology played its part in all three of these indirect ways in the 'opening' of Africa.

It is in its direct influence, however, that Christianity has had its greatest impact on Africa. It has had that influence principally through Christian persons, as has always been the case during and since the days of Christ Himself. And as all of them since Christ

[1] Christopher Dawson, *Medieval Essays* (Sheed & Ward).

have been weak and fallible, weakness has almost always been mixed with strength in Christianity's impact on men and society. It has been so in Africa. One or two Western nations, whose long avowals of higher Christian and civilizing motives in Africa are often formally and publicly repeated, appear to have done little for the social, economic, and political advance of the African peoples.

Despite all this, it seems to me correct to say that the impact of Christianity from the West upon African life has been thus far the strongest element in change and progress in the past three generations.

First, Christianity has been the chief influence in introducing and spreading the concept—revolutionary in Africa's communal society—of individual choice, initiative, power, coupled with sobering individual responsibility for one's fellows and one's society. *Two,* it has been everywhere in Africa south of the Sahara the introducer of Western-type education of the whole man: head, hand, and heart. It still carries the bulk of the load for this broad education, sometimes with and sometimes without the aid of public funds. *Three,* it has been almost everywhere the introducer of Western medical, surgical, and public-health methods, and the pioneer trainer of Africans in these skills. *Four,* it has pioneered in self-help programmes, in agricultural improvements, in training for trades and professions. It was almost everywhere the first to arrange selective visits and studies abroad by Africans. *Five,* above all, through its Christian spiritual illuminations as well as through its slowly convincing demonstrations in medicine, surgery, science, agriculture, and general education, all in a Christian atmosphere, it has given many Africans most powerful aid in the essential displacement of animistic superstitions, fears, and oppressions, the continuance of which in full strength would render quite impossible African advance in modern science, economics, technology, and political forms, and in new optimum social forms and towards a spiritual community embracing all.

Statistics are never wholly revealing or reliable in matters of the heart and mind, and most African statistics have special weaknesses. But the best of these available indicate that there are twenty-one million or more professing African Christians. The same source indicates that in all the rest of the so-called non-Christian world—with about fifteen times the population of Africa—there are some twenty million Christians.

Weaknesses

But there are two great weaknesses in this Christianity from the West which need much clearer recognition and, if possible, effective correction.

The first is closely related to the second, but requires rather different treatment. It is the gaping disparity between profession

and practice in Africa on the part of individuals, institutions, corporations, governments, and some religious bodies. They profess, and perhaps in some degree practise, for example: the worth and sacredness of human personality; individual freedom with responsibility; democratic forms; justice; equality of opportunity; fair rewards of labour; rights and use of land; and sacredness of home and family ties unbroken by legal or economic anti-social pressures for distant labour or for other ends. All these and related matters are professed in keeping with recognized Christian principles, but in practice are violated to some degree almost everywhere and in some areas almost wholly.

It is handy and for some agreeable to seek to lodge all African unrest and bitterness at the Kremlin's gate. Had there never been a Kremlin or a Stalin or a Marx there would have been disappointment, unrest, and fear in Africa to-day. For there is a Christ. The accomplishments of men and women of the West seeking His will and way—savants, scientists, statesmen, and millions of simple men—have yielded greater results and blazoned greater promises than any other power. Africans have seen those results and glimpsed those promises. When the fulfilment of those promises seems denied them, or deliberately delayed, by men and women and agencies from white countries boasting their Christian heritage, inevitable disappointment, unrest, fear, and even hate begin to grow. For these feelings Communism is not responsible. Communism can only sometimes blow the flames.

A strength of Communism—where it has strength in Africa to-day—is that all it need and indeed can at the moment do is to promise. It promises some of the very things which Christianity has promised and has to some extent produced. Christianity, present and visible in Africa for three generations, has no such easy role. It must not only promise but produce, continually produce, and in the *whole* of life, not just through pie-in-the-sky doctrines.

Africans are generally rather shrewd judges of human nature. It is not difficult for them to judge that the failure of this all-powerful Christianity to fulfil some of its promises is human failure; by men, women, and societies that are mostly white, who have, many of them, shown unmistakable racial bias. Colour then gets mixed with basic human weaknesses of insecurity, pride, greed, authoritarianism, lust for power. Where colour enters it can affect everything. Christianity itself gets mixed with colour—not undeservedly if one is to judge Christianity by many Christians. Christianity is condemned. For of that which promises most, most is demanded.

The second great weakness, inextricably linked with the first, grows out of the fact that the teaching and example of Jesus in Palestine, with its repeated and dominant emphasis on the unity of faith and works, of belief and action, of precept and practice, has come to the West filtered through the Greco-Roman philosophy and

culture. And the West has further developed a split human structure compounded of elements we call 'spiritual' and 'secular'; meaning by 'secular' matters from which are to be largely excluded the illuminations and understandings which would normally come from spiritual insights.

This split seems rather natural and desirable to many in the West. For we know from history and from our own observation in our day the repressive and stagnating effects upon thought and freedom when religion gains an authoritarian and then almost inevitably a totalitarian control of all life. This we don't want. Religion in its essence must be first of all personal, be so personally controlling that by individual voluntary witness and action it will build and guide a spiritual community.

But animistic communal Africans know little or nothing of Greco-Roman heritage or of the West's spiritual-secular dividing wall. For Africans their animism has been, by and large, the admitted, accepted, and dominant control of nearly everything within their individual lives and within their society. They have the opportunity in the space of a couple of generations of moving from a primal animistic society into an obviously powerful 'Christian' world. There are few rules of experience for this, since no primal society of this size has ever before been faced with so great a move in so short a time.

These animistic communal peoples, great numbers of them attracted by evidences they see of the beauty and power of this new religion, Christianity, desire to and do move into it. Most of them probably learn to read at least a little of the New Testament as they do so. What they read and what their own animistic communal experience—their only experience—has prepared them for expectantly is doubtless a new sort of 'community' that will be 'Christian': a Christian community in which the whole of life, all of its aspects, will be illumined and guided by the new religion. That is the way it was in their old animistic communalism; that is what they understood their little reading of the New Testament to reveal and promise if men followed Christ. That is no doubt what they are led to expect by much of the preaching and teaching they have heard of the new religion. . . . What do they find?

Certainly that there are congregations to join. Certainly that 'denominations' receive them. Certainly that new standards of personal conduct are put forward. Certainly that individual freedom, choice, and responsibility are stressed as never known before. That love should and can replace fear. That brotherhood far beyond the boundaries of the 'tribe' is preached, and in great degree practised. Certainly that faith is more powerful than fetishes (although the line here is probably not always crystal-clear to new African Christians any more than it is to many older Christians elsewhere). Certainly that Jesus made the supreme sacrifice of His life for sinful

man, and that eternal life is promised. These are all good and rewarding.

Land Relationship Changes

But what about land? What does the Western Christianity say and practise about Mother Earth and man's relation to it and to its elements and products and use: its rivers, lakes, mountains, trees, winds, rains, minerals, animals, crops, ownership?

Here, indeed, must many Africans find paradox. For to them land, Mother Earth, and all its products can seem almost like life itself. There is a spiritual-physical relation to land, quite different in details in different tribes, but of the greatest intimacy and importance almost everywhere, which is a characteristic of primitive societies.

In the Old Testament some of the prophets wrote with considerable concern about the new ideas which were tending to disrupt the good and proven spiritual-communal relationships to land. Our Hebraic-Christian culture has taken long generations to develop the practice of private ownership of land. In some Anglo-Saxon and other Western countries private ownership may seem to work fairly well. But not everywhere, even in the West. What problem is more basic and emotionally charged in Italy, for example, than that of the huge individual and institutional private and alleged exploitative ownership of land? Communism finds land nearly always a fundamental, difficult, highly-charged problem. It is one of the greatest in India, where religion strongly opposes change in man's relationship to land. And in China also. In most non-Christian societies men's religions directly and mightily reinforce their physical identification with their land, and their strong resistance to change regarding land.

It is the ' Christian ' West that registers spiritually nearest zero regarding land. We almost seem to have eliminated man's spiritual insights and acknowledgments concerning land. In the West it seems to be regarded as almost wholly a ' secular ' possession. A Christianity largely devoid of spiritual commitments about land is brought by the West into Africa.

I stress this matter of land for three reasons. First, land in this primal African society is something like an iceberg in the ocean: nine-tenths of it is beneath the surface, never seen. We view the top, the surface of the land in Africa, its crops, trees, waters, animals, the small figures of people moving over it. But deep, deep below is the mass, the base, the foundation of it all: the innumerable ancestors, myriads of spirits, generations of fears, traditions, beliefs, hopes; fixed, solid, only slowly to be changed, and only with the aid of the spirit.

Second, land, its possession, its use, and its products are high among the indispensable foundations of an improved economy, a

stable government, a productive society, and a truly Christian community.

Third, the weakest efforts and greatest handicaps of Western Christianity to-day in Africa are perhaps those related to the land, largely because the appealing religion is gradually being seen by Africans as one with no satisfying philosophy and consistent spiritual practice regarding land. How on God's earth can God's community be really built if the land of God's creation is not God's, and the products thereof which are spiritually and physically designed for the good of the whole community? Thus can Africans ask, and others.

Does this seem to us merely an exercise in the realm of theory only? Perhaps so. For the West in its thinking is three or four thousand years away from its animistic communal past. But that past is, in large part, Africa's present. The scarcity of Western spiritual insights into Africa's present is both a weakness and a danger. Many missionaries, and some other Westerners, have such insights to considerable degree. But by and large, full of our Western intellectual and technological ideas (as in the matter of land), we approach Africans on the basis of the one-tenth of the situation which we see on the African surface, little understanding and perhaps rather scorning and dismissing merely as 'superstition' the nine-tenths beyond our sight deep in the African heart and community.

And in addition, in some areas, we take the African's land, we who he feels as outlanders have no land rights at all; hold much of the best of it for our own private purposes; and then perhaps create 'reserves' or 'locations' to which we are willing to proffer him rights but sometimes without definitive title such as we decree for ourselves.

In so doing we do grave wrong in at least three ways in the eyes of many Africans. We fail to help them to a satisfying Christian spiritual understanding of man's basic relationship to Mother Earth, upon which so much of their whole life depends. We 'steal' the land, Africa's greatest patrimony; the very source of life. And we thus do violence to what we preach and teach about the fatherhood of God, the brotherhood of man, the strong aiding the weak, and the sharing with one another as children of God.

Western Economy and Medicine

The lack of a linkage clearly seen by Africans between Christian controls and the cash economy introduced by the West during the past century is another disturbing weakness in African society. The barter economy accompanying African animistic communalism was fully and securely tied up with the spirit beliefs and tribal sanctions of the group. Barter substances came from Mother Earth. Barter articles were almost always fashioned from those spirit-filled sub-

stances and were then chiefly used for spirit-controlled purposes within the clan and tribe or between tribes, under spirit-sanctioned customs. Cash, when it was introduced, escaped spiritual and tribal sanction in large degree because it was so completely foreign. A money economy can be exceedingly disruptive in a barter society, the more so when unaccompanied by sound, clear, spiritual controls accepted and shared by those introducing the new foreign element of cash. No doubt to many Africans our Western Christianity seems to have little such control over the cash economy with which it has lived for a good many generations.

The West's approach to disease and practice of medicine and surgery must be almost unintelligible to Africans until and unless some of their animistic beliefs about causation and cure of human illness begin to change. How far even convinced Christian doctors and nurses can convince African animists spiritually through reinforcement of their scientific medical and surgical wonders by their Christian teaching is hard to know. Also there are many Western medical people giving good scientific service in Africa who are not professing Christians. They have had their training and experience largely in a West whose freedom to investigate, search, research, invent, experiment, and dare (six exercises largely denied in animist communal society) is principally the result of Christian-founded education and the intellectual, economic, democratic society. But they are able only indirectly and perhaps rather feebly, if at all, to give the African animists a constructive spiritual undergirding for Western medicine and surgery.

Can we not here again glimpse something of the confusion and murk in which numbers of Africans must be—their animist lights growing slowly dim and even being snuffed out; the new spiritual lights from the West being yet flickering and full of dancing, distorted shadows in so many of the major sectors of their new and changing African life?

Western Education

Now if, to cap it all, Western education as defined at the opening of this paper—the " process of guidance to greater moral, aesthetic, and intellectual maturity "—is to have a great part of its Christian spiritual content squeezed out as it has been squeezed out in the West, then it seems doubtful indeed if a prevailing Christian community will be built by Africans in their land.

There is great danger of this squeeze-out. Truly, Christian missions still carry the bulk of all education south of the Sahara. But four other things are also true. First, that missions simply cannot, and perhaps should not, carry much longer so high a percentage of the desirable and ever-increasing educational effort. Second, that even the most effective Christian missions have not been universally successful in helping the Africans develop a

winsome, sound Christian philosophy. This seems to me to be illustrated by what is set out above. Other illustrations and even deeper probing than the foregoing would almost certainly reveal correspondingly wider and deeper gulfs between preaching-teaching and practice. Third, that increasing government aid and responsibility in education (necessary beyond any doubt, and desirable) will probably push the curriculum more and more in the Western direction in which it is now already going in most places under government aid: towards a ' secular ' curriculum in which less and less time is used for spiritual illuminations of the subject taught. And fourth, that the gradually growing higher educational institutions in Africa —universities, technical and professional schools—are quite understandably almost wholly in the national patterns of the various Western countries having colonies in Africa. This means that they generally separate—as in the West—spiritual illuminations from much of the ' secular ' curriculum material. Or such illumination, if ventured, tends to be sectarian or confessional, as well as Western, in its approach. In either case adequate contact is not likely to be made with the African mind and spirit.

There are two principal reasons why Western countries lay down these national patterns of higher education (indeed of all education) on their African colonial peoples. One, each is that which a Western country has developed for its own citizens. It is the pattern these citizens know best, sometimes the only one they know. Despite possible criticisms it still seems good enough for the ' mother country '. Doubtless it is good enough for the colonies. And besides, it may help in conditioning the colonial peoples to long congenial association with the mother country.

The second reason is that up to now most literate Africans have seemed to want a Western-type education of exactly the kind their European rulers have approved and used for themselves. Rarely has an African trusted Westerners to modify Western education ' to meet the needs of the Africans ', lest those needs be in ignorance or by design scaled down by the West to keep the African disadvantaged and ' lower ' than the Westerner. Further, government and industrial appointments and promotions, salaries and influences are often keyed to Western academic and professional degrees. If Africans had available only something other than the best in the latter they would probably only be given something other than tops in the former.

But profound changes are occurring in many areas in Africa to-day. Millions of Africans are in schools (though more millions are not, because there are neither enough teachers nor enough schools). Tens of thousands are taking post-secondary work. Thousands, in Europe, North America, and Africa, are taking graduate work. Among them some men and women are beginning to see that the mere transplanting of Western-type education in

Africa is no more suitable or likely to take African rootage than is the transplanting of Western-type Christianity. They also see, many of them, that both Western education and Western Christianity have in them deep, rich values basically important for any society anywhere. Indeed, those basic values of education and Christianity in the West seem to many Africans the greatest of which they can conceive for Africa and the world.

But these wise African friends, many of them, want two things in connexion with the universal values of Western education and Christianity: they want them *combined*, so as to assure a continuance of that wholeness which is realistic and therefore best in human life; and they want them, in their application, *adjusted* to the urgent but varying needs of to-day's and to-morrow's changing Africa.

Combination and adjustment—is that not life? Life based on never-ending realities and assurances but growing through never-ending combinations and adjustments of soul and science, of mind and hand, of man and nature.

The West a century or so ago unilaterally (with that blindness to full consequences which is part of our human handicap in all we do) first brought these pressures on Africans to make never-ending combinations and adjustments. In this past century the speed of world change has increased as in no previous century. The speed of Africa's change, without any plotted human design, has therefore increased even more.

Instead of Africa trying to adjust from its own animistic communalism to a Western society which was 'normally' advancing from the end of its nineteenth century to the end of its twentieth—an African feat which in itself would have been unprecedented for so large a mass—Africa is now trying to adjust to a Western society whose past century of change has in some respects, both good and bad, been greater than in all the other nineteen.

We from the West, it is true, started this change in Africa: not just the Christian missions, but also traders, politicians, explorers, adventurers, thrown up by a 'Christian' and outreaching society. Now, however, many Africans have steam up; they too want progress. Some want it quickly, if possible before all the cream gets skimmed off the African milk. The wealth and worth of Africa won't be exhausted as quickly as all that, but African fears and urges are nevertheless understandable. The scope and speed of their change is dizzying. How must the Africans feel?

For one thing, they see our confusion, our uncertainty, our conflicting counsels, our frightening battles among ourselves—two world wars, for example—our social, economic, political errors and sins. They see our *fear* of Communism. Some of my African friends find it really hard to understand that fear. Why a supposedly Christian society with all the powers and wonders it has produced and with its believers established in every country in the world

should fear Communism, whose most attractive promises are so closely akin to the very good which Christianity promises and has produced in considerable degree—indeed, Africans find this hard to grasp. As a matter of fact there are Africans and Westerners who believe that Communism has its greatest reality to many Africans largely because so many Christians obviously are afraid of it. If Christians with all their power really fear Communism, maybe there is something in it for Africans!

Combination and Adjustment

Combination and adjustment, with almost impossible speed, challenges African society to-day. Indeed, they challenge the world. The whole spread of history shows that, although powerful ideas and other stimuli can and do come from one country to another, in the end it must be the country's people themselves who take these elements from abroad and the vital elements from their own past and with them create their present, mould their future and shape their place in the world.

An unprecedented century is just ending for Africans and the world. The West can and must still aid Africa. But if blood and hate are not to boil, that aid must come in an improving climate of confidence and co-operation. Such a climate in the society of man is compounded of self-help with trusted, invited aid; of self-expression with sought expression from others; of self-confidence with shared confidence in tried friends and their trusted and relevant experience; of willingness to work, and to work with others; of work for one's self, plus work for others; of opportunity for everyone, according to ability, to participate, produce and progress.

We Westerners think Africans have much to learn about all these things. They have. But Westerners have also. And one of the greatest of these things is this, struggled for by millions in our West already: that life is one, indivisible, whole; inclusive of people, of ideas, of things; that a society declared or *de facto* split, whether as to white or coloured, rich or poor, ignorant or learned, spiritual or secular, is, regardless of wealth, size, technological gadgets, or present physical armaments, a backward society, not Christian; vulnerable, indeed, dangerously weak.

The Christian objective in Africa and in our world must be to attain that confident strength which comes from this wholeness of man's life, beginning within man's own person and in that community wherever he is.

If Africans and we work successfully at this we shall together make progress towards the greater moral, aesthetic, and intellectual maturity of us all. That will be as rewarding to the West as to Africa. The world will profit, and all men.

Emory Ross.

CHAPTER EIGHT

THE TRAINING OF SAUDI ARAB EMPLOYEES: ARABIAN AMERICAN OIL COMPANY

As a sovereign nation, Saudi Arabia is less than thirty years old. Its existence as such probably dates from 1927, when the British government recognized the independent sovereignty of the late King Abdul Aziz ibn Saud over the country which, in twenty-five years, he had brought under his control, a period which started with his dramatic seizure of Riyadh in 1902. The single kingdom known as Saudi Arabia was not established until 1932.

The illustrious Ibn Saud gave his country a unification, stability, and security which it had not known for centuries, and perhaps had never known. But time and effort were, and are, still required to develop economic resources, education, better living standards, and other advantages which, along with unity and security, are essential for the country's well-being.

Under the centuries-old conditions of near anarchy and poverty before the rise of Ibn Saud, there was neither a demand for general education nor the means to provide it. Both have largely resulted from the discovery and development of oil. A large new industry has created a new demand within itself for people with all types of training; and it has, of course, increased both the prosperity and the complications of life and government which urgently call for education, perspective, and integrity if the great resources are to be utilized with wisdom and equity. The future of the nation which Ibn Saud established depends very largely upon the extent and the soundness of the education received by the young men who will occupy responsible positions in the Government and the industries.

New as the nation is, its oil industry is even newer. Oil was not discovered in Saudi Arabia until 1938, and its development was almost brought to a standstill by the World War. The average daily oil production in 1944 was only about 21,000 barrels (2,800 tons). In 1952 and 1953 the daily production has been running between 800,000 and 900,000 barrels (100,000 to 120,000 tons). Thus, in about eight years, there has been more than a forty-fold increase. It has meant the creation of new oil-handling facilities and of communities and industrial facilities, spread over a very large

area, at a rapid rate of construction and development which has been an outstanding achievement of private enterprise. It has also meant a spectacular increase in Government income; wealth and prosperity for those who have been in a position to profit by the requirements and payrolls of the Government and the oil industry.

The Arabs generally have been well instructed, and the religious leaders highly so, in the tenets of the Muslim religion and the law, customs, traditions, and culture which are so closely related to their religion. But, before economic resources became available, lay education in Saudi Arabia was confined to the private tutoring of the sons of rich men and rulers, plus some small schools in the Hejaz. In recent years, however, education has been recognized by the Government as a great and pressing need; and already secondary schools in the holy cities of Mecca and Medina have turned out hundreds of boys who have been receiving college education in the Middle East, Europe, and the United States under Government scholarships. The Government has also been making serious efforts to establish an adequate school system in other parts of the country. In Al Hasa province, in which Aramco operates, there are now twenty-one elementary schools and one secondary school. Seven of the elementary schools were opened during 1953. The secondary school, at Hofuf, was opened in 1948. Of an elementary enrolment of about four thousand in the Al Hasa elementary schools, the great majority, naturally, are in the lower grades and only sixty-five were graduated in 1953. In the current pattern, the majority leave school before the fourth grade.

The elementary school curriculum established by the Ministry of Education is composed of four major study areas, viz. religious knowledge, history and geography, Arabic language, and mathematics. The table below shows the time by class periods devoted to each subject area each week by grades:

	Grades					
	1st	*2nd*	*3rd*	*4th*	*5th*	*6th*
Religious knowledge	22	19	19	15	12	11
History and geography.	—	—	2	2	4	4
Arabic language	4	12	9	13	14	14
Mathematics	2	3	4	4	4	5
	28	34	34	34	34	34

The emphasis given to religious education indicates the large part played by the strict Wahhabi faith in the Saudi Government, and also that the lay education requirements of a rapidly developing

economy are still regarded as secondary in importance.

The rate of expansion of the school system seems to depend more upon the availability of teachers than upon money or governmental interest. Trained teachers are naturally scarce in a country which has known little education of any kind. The Government has had to rely largely upon teachers brought in from Egypt, Palestine, and other Arab countries, but many of these men from large Mediterranean cities do not feel at home in Saudi Arabian towns and, moreover, bring in a background and ideas which are not entirely compatible with Saudi Arabian conditions. Recognizing the great need for Saudi teachers for Saudi children, the Government has recently established teacher-training institutions in Mecca, Medina, Taif, and Jiddah in the Hejaz and in Riyadh in the Nejd. A similar institution has been authorized for Hofuf in Al Hasa.

The schools are for boys only. Any general approach towards the education of women has still not been made and perhaps is not very near.

Many people in the Government have believed for some time that the education of the sons of Aramco's Saudi employees is the responsibility of Aramco rather than the Government. Regardless of whatever justification there might be for this belief, Aramco has not wanted to become involved in public education of Saudi children as an oil-company operation. However, Aramco has agreed to build and defray the cost of operating ten schools in Al Hasa towns which will have a total capacity equal to the number of employees' sons of elementary school age. These schools, which will become an integral part of the Government school system and will be operated by the Government, will be built in 1954 and 1955.

The Training Problem of Aramco

The Saudi Government school system is not within the scope of this article, but, without some knowledge of it, Aramco's training problem cannot be properly understood. What is being done educationally now for children will be of great future benefit, and already a small but increasing number of literate young Saudi Arabs apply to Aramco for employment. But the important fact remains that the great majority of Saudis employed by the company have reached adulthood with little or no schooling. Furthermore, the nomadic life of the Bedouins and the simple industries of the towns have given them little in the way of skills or habits which fit them for work in a modern industrial enterprise.

This means that their ability to do something other than unskilled labour must depend on training offered by Aramco itself. Nevertheless, Aramco has always recognized the need for Saudis to participate as fully as possible in the enterprise. The company's official and published policy in this regard is:

> To offer Saudi employees encouragement and assistance, through improvement of both skill and knowledge, to develop their ability to perform Company work of all kinds and levels; and to do so in sufficient numbers to provide for the maximum practicable utilization of Saudis in every organizational unit and every type of work.

Considering that there are about fourteen thousand Saudi employees and upwards of eight thousand currently enrolled in training programmes of various kinds, this policy, and the situation which inspired it, have presented Aramco with a unique and complex educational and training problem.

The familiar Western approach of educating and training one group of people (the young) as a separate activity, while another group (the adults who are already trained) do the work of industry would not be practicable for Aramco. A period of years would elapse before there could be any meaningful Saudi participation in the Aramco enterprise; meanwhile the trained adults would have to be largely foreigners. This course would not be palatable to the Saudis even if Aramco chose to follow it. Accordingly, Aramco has had to carry on a large part of its work and a large training operation with the same people at the same time.

The training of Saudi employees while they work cannot be limited to so-called on-the-job training. The more able Saudis could not get very far without related and even general knowledge which the more complicated and advanced jobs require. Accordingly, the programme is designed to supplement job-skill training with classroom instruction in related and general knowledge both on assigned Company time and in their spare time on a voluntary basis. While this classroom instruction must be limited to essentials in preparing the men for Aramco jobs, the opportunity to progress through elementary, secondary, and college levels of education is open to able Saudi employees who might succeed in jobs for which such education is required.

Presented below, at the cost of some repetition, are both a description of the training and educational 'system' adopted by Aramco (i.e. the organization of training, training facilities, schedules, and curricula) and a discussion of what the system offers from the viewpoint of Saudi-employee development.

The Training and Educational 'System'

The Organization of Saudi Training

The Arabian American Oil Company (Aramco) holds an oil concession covering a large area in the northern, eastern, and southeastern portion of Saudi Arabia. It is an American company, and its concession has been developed under American leadership and the guidance of American technical knowledge. At the end of 1953 there were 3,166 Americans, 5,073 non-American foreigners, and

13,555 Saudis, making up a total field force of 21,794 Aramco employees in Saudi Arabia. These numbers do not include casual (temporary) employees of American service organizations and Arab contractors performing work for Aramco.

The Aramco training problem has made it necessary to place the responsibility for Saudi training upon the operating, or 'line', organization: that is, upon the people for whom the Saudis work. Thus the responsibility is placed upon people who are ordinarily very busy with other things and whose own training has not been in the training field. There is no other practicable approach in all the circumstances. Each organizational unit employing Saudis is expected to have its own training programme, designed gradually to replace foreigners in various types of work for which Saudis can be expected to qualify through training in a reasonable number of years.

The organization and co-ordination of training are adapted to the pattern of the whole organization of Aramco, whose operations extend over an area of hundreds of square miles. Administratively and geographically, the operations are divided into three districts—Abqaiq, Dhahran, and Ras Tanura, these being the names of communities located about forty-five miles apart by road. Abqaiq District is responsible for the major part of Aramco's oil production from fields extending over an enormous area to the north, west, and south of the community itself. Dhahran is also located on, and is responsible for the production of, an oil field, which was the first Aramco field to be discovered. It is also a point of co-ordination and of transfer of both oil and materials, and is the site of the Aramco General Office. Ras Tanura is primarily an oil refining and shipping terminal.

Each District is under the administration of a District Manager. The work of each District is organized on a functional basis, with general superintendents responsible for departments of related operating or staff activities, i.e. accounting, engineering, and mechanical services, oil operations, industrial relations, materials supply, and community services. The departments are further divided into divisions, each under a Division Superintendent or Supervisor. Within the divisions, the large shops, plants, or office units are under foremen or supervisors, who in turn may have assistant foremen, shift foremen, and skilled workers and group leaders known as 'leadmen' under their direction. The majority of the 'leadmen' are American craftsmen or operators who often have direct supervision over the Saudis who do as much of the work as practicable and are being trained for advancement. These 'leadmen', or their counterparts of a different title in the storehouses, residential services, and offices, have an important role in the development of Saudis, since they are in direct, day-by-day contact with them.

Division superintendents have the help of Division Training Supervisors who work with foremen or the equivalent in the planning and implementation of their training programmes. Moreover, foremen of the larger units have unit trainers assigned to them to look after this phase of the operations, for which the foremen are responsible. All the organizational units receive professional help and guidance from the District Training Division. They also have the services offered by the Training Division in the form of classroom instruction, about which more will be said later.

The foreman has further staff help through a formally established shop committee, of which he is chairman and of which the Division Training Supervisor is executive secretary. Other members may include representatives of such staff agencies as training, personnel, wage and salary, safety, methods, and organization. The membership varies according to the problems on which joint discussion is needed.

With the staff help available to him, each foreman is expected to formulate a specific plan of action, in writing, for the training and utilization of Saudis in his unit. It is expected to be based upon a study of the work load and an organization of the work of the unit which permits a maximum practicable utilization of workers whose skills and knowledge are necessarily limited to narrow fields. The duties, and skill and knowledge requirements, of the jobs (designated as 'whole jobs') for which a fairly high level of general individual competence is needed, have been analysed. Until a Saudi reaches this level of competence, he may act as a helper or perform certain duties under close supervision. Each 'whole job' for which a Saudi is being trained is broken down into 'wage progress steps', through which the Saudi can progress from the simpler to the more complex duties and responsibilities and can improve his earning power as he improves his value to the company. Each succeeding 'wage progress step', however, requires a satisfactory performance of duties indicating improved skill or knowledge or both.

The plan of action referred to above, and a summary of the work load and organizational analysis upon which it is based, is called a Unit Training Programme. It is expected to provide for a specific plan and schedule under which Saudis currently employed in the unit can progress to higher 'wage progress steps' and to higher-level 'whole jobs' if they have the ability and willingness to meet training and performance requirements. It also provides for a plan and schedule for the employment and training of new recruits in the numbers needed to provide for turn-over (which is large) and to meet training objectives. Finally, the Unit Training Programme provides for the space, equipment, and training staff needed to do the training job and an estimate of the costs of the programme.

The Unit Training Programme as proposed by the foreman or supervisor must have appropriate approvals, but, once it is approved,

the foreman is expected to adhere to it in so far as he can control its implementation; and to report regularly on 'how he is doing' and on difficulties encountered which are beyond his control.

The success of Saudi training depends very largely upon the zeal and interest shown by the foremen in the planning and implementation of their individual programmes.

There are three general types of work for which Saudis are being trained: crafts, operation of plants, and office work. The drilling crews are largely Saudis. There are, of course, many variations within these types, and there are other kinds of jobs in the storehouses, transportation, dining-halls, residential and community services, which are large operations in an oil company that must not only carry on its oil operations but provide most of the supporting services as well.

In all cases, of course, the training falls into the general categories of actual job skills and related knowledge needed for intelligent performance of the job.

Varied as the work is, there is a large variation in the training for which the Unit Training Programmes provide. In the shops it has been found advantageous to give skill training in shop bays in which trainees can use hand and machine tools under the supervision of full-time instructors. In plant operation, the trainees must get most of their experience as helpers in the plants themselves. Drilling crews must be trained in drilling operations. Automobile and truck drivers, crane operators and riggers receive their initial training in a drivers' school separately operated for the purpose.

In all cases, provision must be made for planned specific training under an instructor, including classroom instruction in related knowledge. Aramco has authorized the use of one-eighth of the working time of Saudis for this purpose. The foremen are allowed great flexibility in the use of this time so long as there is an appropriate balance between work experience, skill training, and classroom instruction. If the needed related knowledge training consists of special instruction applicable only to a better understanding of the work being done, classes are usually held in space provided at the job sites. But if the related knowledge needed is in the field of general elementary schooling, the foremen can assign their trainees on a part-time basis to schools operated by the District Training Division. In the training of clerks, for example, this type of training is of primary importance; but it is also important in the shops and plants for the more complicated jobs in which an understanding of theory and judgment factors are important elements.

While Aramco work is performed and administered in the Districts, over-all planning, programming, and general guidance and co-ordination are provided in the general office in which Aramco top management is placed. General Office departments of which Training, being one of Aramco's large operations, is one, have a general

staff function of providing both co-ordination and guidance in the different major lines of activity. The General Office Training Department contains three divisions: General and Industrial Education, Job Skill Training, and Supervisory and Management Training. The division first named, in addition to its staff function, operates an Advanced Industrial Training Centre offering training of a secondary school level to eligible Saudis nominated by all districts.

At the end of 1953, one hundred and five American and two hundred and ninety-six non-American employees were devoting full time to training in the Aramco organization. In addition, there were thirteen American and two hundred and eleven non-American part-time instructors. The latter, in terms of man-day units, bring the total training manpower to about five hundred. These members do not include fifty-one principals and teachers in the schools for children of American employees operated in the three Districts, but do include a small group devoted to Arabic language training and supervisory training for American employees and to general direction and co-ordination of all educational and training functions.

Schools for Saudi Employees

As mentioned above, responsibility for the development of Saudi employees is decentralized and placed in the individual organizational units in which the Saudis work. However, as a service for the operating organization, schools in all three Districts provide classroom instruction in general knowledge (and some special) training of an elementary level. This programme, operated by the District Training Divisions, is known as General Industrial Training. It consists of two principal operations, which we know as 'assigned' and 'voluntary'. As these names imply, the difference is that employees are assigned to the one on 'company time', and attend the other voluntarily during their spare time. A large number of employees, of course, attend both.

The courses offered in this programme are divided into six levels corresponding approximately to the levels of instruction of elementary schools in the Middle East.

As another facet of the General Industrial Training Programme, the District Training Divisions also operate a special programme for new recruits known as Pre-Job Training. This will be discussed briefly under the heading, *The Development of the Saudi Employee.*

Assigned General Industrial Training

For the simpler jobs, in which some degree of motor skill is the chief prerequisite, related knowledge is not important. But, as stated above, Aramco's plans for the utilization of Saudis are not limited to the filling of such jobs, but contemplate giving Saudi

employees the opportunity and help to rise as high as they can, each according to his ability and interest.

Therefore, training in related knowledge is an important element in the training picture. This is true, of course, in any training programme. In Aramco, however, we must first start with elementary education which, in industrial countries, is ordinarily obtained during childhood; secondly, we must be selective in concentrating on men who have the necessary interest and ability to progress; and thirdly, we must limit related knowledge training to essentials.

As mentioned briefly above, Aramco jobs which Saudis can be trained to fill in a reasonable number of years are designated as 'whole jobs', and for training purposes are broken down into 'wage progress steps'. Each 'wage progress step' calls for a certain amount of related knowledge as well as progress in skill development. If the related knowledge needed is such that the training can advantageously be given in schools, the foremen or supervisors may assign their men to courses offered by the District General Industrial Training Programme. The courses offered, in turn, depend upon the need at any particular time for group classroom instruction.

The assignments to the schools are on a part-time basis and must be properly balanced with training and experience applicable to the jobs. They may be for periods of one or two hours daily. In many cases (clerical jobs, for example), in which knowledge is one of the most important 'tools of the trade', it is often advantageous to fill each job with two men who alternate between half-day periods in school and on the job.

The courses being offered by Assigned General Industrial Training, with some variations between Districts, include arithmetic, Arabic, English, general science, typing, drafting, office practice, and hygiene. English and arithmetic have by far the largest enrolments, as both are important to a large number of jobs. The reading lessons in both English and Arabic introduce the trainees to much simple scientific, industrial, vocational, and other knowledge of a general nature.

Voluntary General Industrial Training

In contrast to the selectivity exercised in assigning employees to the schools during working hours, Voluntary General Industrial training is open to all Saudi employees who are able to keep up with the requirements of ordinary school progress. There is a natural selection involved, however, since only those who have a real interest in self-improvement will devote spare time to this activity.

The classes of day workers run from 5.15 p.m. until 10 in the evening. About half of the total enrolment is concentrated in the first hour, the period between the close of work and dinner-time. Other schedules are available for shift workers.

The courses presently being offered reflect the demand and are

mostly confined to arithmetic, Arabic, English, and typing. English is by far the most popular, and accounts for about half of the total enrolment.

In time, as employees advance, both the level and the character of the courses will change. As mentioned above, many employees attend voluntary classes to supplement the training offered on assigned time.

District School Facilities

For some years, the Ras Tanura District has been in the envious position of having a school building for Saudi training which was actually designed and built for training purposes. It has been and is being enlarged. Under a great load of necessary construction for other purposes, the other Districts have had to get along with make-shift school facilities either abandoned for other uses or installed as temporary structures. This situation is in the course of being remedied, and during 1954 both Dhahran and Abqaiq Districts will be provided with school buildings to house the General Industrial Training programme, ' assigned ' during the day and ' voluntary ' in the evening. Both buildings will be of the same design except for size, Abqaiq having twenty classrooms and Dhahran twenty-four. In addition, the buildings will each contain a science laboratory, a library, a large room for general lectures and film projections, a drafting room, a teachers' room, and administrative offices. The buildings will be well ventilated and lighted, and air-cooled during the warm months.

Enrolment in Assigned and Voluntary General Industrial Training

In programmes of these types enrolment is bound to be irregular, as it varies with work interference, demand, interest, and season. It is largely brought to a halt during the month of the Ramadhan Fast. The best indication of magnitude can be obtained from peak enrolments during the last three years, as shown in the table on next page.

The highest percentage enrolment in Ras Tanura ' voluntary ' probably reflects a more conveniently located school building with respect to Saudi living-quarters. The comparatively low enrolment in ' assigned ', on the other hand, is due to the fact that the school is some distance from the industrial area and the operating units are more inclined to give their own classroom instructions. With better locations and better facilities, voluntary enrolment is expected to increase greatly in the other Districts.

Campaign Against Illiteracy

During the year 1953, Aramco has taken part in a general programme sponsored by the Government in an effort to improve literacy among the Saudi Arabs in their own language. So far as Aramco is concerned, the programme is limited to employees, and is

	Average Saudis Employed	Voluntary GIT Peak Enrolment	Voluntary GIT Month	Voluntary GIT % Saudis Employed	Assigned GIT Peak Enrolment	Assigned GIT Month	Assigned GIT % Saudis Employed
1951:							
Abqaiq	3,363	357	Dec.	10·6	984	Dec.	29·3
Dhahran	4,908	517	Nov	10·5	2,101	Jan.	42·8
Ras Tanura	3,472	812	Dec.	23·4	1,359	Jan.	39·1
1952:							
Abqaiq	4,599	650	Nov	14·1	1,589	Dec.	34·6
Dhahran	5,713	728	Aug.	12·7	1,208	Oct.	21·1
Ras Tanura	3,740	880	Mar.	23·5	529	Mar.	14·1
1953:							
Abqaiq	4,244	610	Jan.	14·4	1,755	Mar.	41·4
Dhahran	4,902	673	Apr.	13·7	1,870	July	38·1
Ras Tanura	3,722	735	Nov.	19·7	429	Dec.	11·5

housed in facilities separate from those devoted to Voluntary General Industrial Training. Since there are monetary rewards, many employees are attracted who have not enrolled in 'voluntary', hence the programme helps to fill the literacy gap. The Government supplies the textbooks and specifies the curriculum; Aramco provides the facilities and operates the schools during the evening hours.

This effort in basic education is scheduled by the Government to continue through two years and provides for instruction in Arabic, arithmetic, geography, history, and religion comparable to that provided in the lower grades of the Government elementary schools.

The experience in attendance and interest compares favourably with that in similar projects for adult education in America and Europe. Attendance has varied from more than 1,900 to less than 800. There is evidence that approximately 20 per cent. of those who enrolled will remain in attendance until they have achieved a reasonable degree of literacy.

Advanced Industrial Training

The general office operates an Advanced Industrial Training Centre in Dhahran offering training of a secondary school level to Saudi employees nominated by all three Districts and the General Office.

This was started in 1950 as a two-year, full-time technical school programme offering both skill and knowledge training in the crafts, cookery, nursing, and commercial subjects. Its highest enrolment, about 120, was reached in September 1952. However, in the spring of 1953 it was decided that, although intended to be on an advanced

level, the training was in fact duplicating types of training which the operating organizational units and District schools were doing or should do. Moreover, the long period in school tended to make the trainees lose touch with their jobs and their supervisors lose touch with their trainees.

Accordingly, beginning in September 1953, this programme was placed on a different basis. The first major change is that trainees are accepted only after they have completed the levels of knowledge training offered in the Districts and are well advanced in their skill training. The second major change is that the training is now being placed on a 'co-operative' basis, under which the trainees will alternate between periods in school and periods of guided work experience under their own supervisors. This encourages both the supervisor and the trainee to take the appropriate amount of interest in his development.

The new arrangement has started off with a very modest enrolment (twenty-three), but it should grow steadily on sound and constructive lines as necessary details for a good 'co-operative' programme are worked out. The curriculum is divided into two units: clerical and academic. The former includes typing, shorthand, office machines, elementary accounting, business English, and business mathematics. The academic curriculum includes English, Arabic, mathematics, science, history, geography, sketching and mechanical drawing, and hygiene.

This programme serves the same purpose as General Industrial Training at a more advanced level. It is intended to provide training in knowledge and special training for selected employees who seem to have potential qualities for greater responsibilities or higher-level jobs. It can help clerks to become accountants, typists to become secretaries, or craftsmen or operators to become supervisors. For certain well-qualified employees it also serves as preparation towards eventual college levels of education. For the latter, employees are assigned to colleges in the Middle East.

Nurses' Training

Basic training for Saudi male nurses was inaugurated as a regular part of hospital operations in 1947, and a special school to systemize the training was established in the following year. In 1951, the first group of nine student nurses trained in Dhahran were selected for continuation training at Kennedy Memorial Hospital, Tripoli, Lebanon. At the end of December 1953, sixty-four Saudi employees were in training in the three-year curriculum at Dhahran and an additional eleven were receiving continuation training at Tripoli. Seven Saudis out of a total of nineteen selected for continuation training at Kennedy Memorial Hospital have been awarded the International Council of Nurses' diploma and have returned to medical department assignments in Arabia.

The Development of the Saudi Employee

Recruiting and Selection

Saudis from various parts of the country report to the Aramco recruiting offices, though naturally the majority are drawn from the immediate area of the Company's operations. The Saudi work force is made up of about 20 per cent. from Bedouin tribes and 80 per cent. from the towns.

Physical fitness is, of course, a prerequisite for employment, and physical deficiencies account for a large number of rejects. The minimum employment age is 16, although exact ages are unknown to the majority of Saudis, who do not count birthdays as we do in Western countries. Allowing for this inaccuracy, employment age runs ordinarily between 14 and 25, with exceptions on both sides.

Aramco now, fortunately, has a Saudi General Classification Test giving a fairly reliable index of intelligence, defined primarily as job-learning ability. By this means, the Saudis may be grouped into five classes of general aptitude for purposes of predicting their ability to learn, and hence the test acts as a valuable aid both in their selection and in guiding them into the most appropriate fields of endeavour.

The development of this test, which is in six forms, has been an interesting story in itself. It required about three years of research headed by an Aramco psychologist and guided in its technical aspects by a consulting firm in New York. While the factors measured closely resemble those of other tests which have been developed for the prediction of learning ability in other nationalities, the problem here was to develop measurement devices based upon the culture and experience of the Saudis which can be administered orally and individually to illiterates in colloquial Arabic. The tests are administered by Saudi examiners specially trained for the purpose.

The organizational units are now in a better position to requisition new employees not only by numbers but by types needed to fill the requirements of specific ' whole jobs '. Hence Aramco has made a great step forward in this initial aspect of selectivity, which is so essential to the success of its whole Saudi development programme and which was lacking except by trial and error in former years. The tests, of course, like other tests, are not infallible and are regarded only as an extremely useful tool in selection procedures.

Pre-job Training

After recruitment, the new Saudi employees first go through an introductory training period designated as ' pre-job.'

The first two weeks of this programme are devoted to full-time, simple instructions in such things as personal hygiene, safety precautions, employee benefits, basic rules and procedures, the nature

of Aramco work and of the Aramco enterprise, and its role in the development of Saudi Arabia, the names and uses of common hand tools, and simple numbers and measurements.

This two-week 'orientation phase' is followed by a variable period in which the Saudis are introduced to their jobs. This is both a probationary period and a period in which they can receive guidance in finding their proper placement. Saudi counsellors are available to advise them, and their prospective supervisors have a chance to try them out. In this process the attempt is made to get a further opinion, to supplement the Saudi General Classification Test, of their potentials and aptitude. If the work they are selected for is such that they need some basic training or schooling before they can even make a start in doing something useful, they are given this training in what is called the 'intensive phase' of Pre-Job Training. This usually consists of part-time schooling and part-time simple job experience for a period which varies according to the amount of basic training needed for particular jobs.

Those who prove to be entirely unsuitable at any time during a probationary period of three months are discharged. This does not imply, of course, that employment would not be terminated after three months of service if there is sufficient justification.

Development as an Employee

After completing pre-job training, the Saudi becomes one of Aramco's work force and a member of a working organization. The emphasis given to training in this article does not mean that Aramco is merely operating a large training school so far as Saudis are concerned. What promotion the Saudis are able to make after employment results from improved work performance and work value. In this respect, the Aramco situation is not unlike the opportunities for advancement commonly offered in Western industry. The difference is largely one of degree in the extent to which the employer is willing to extend a helping hand to those employees who have an interest in advancement and in the level from which training must start. The Aramco situation is also different in the preference given to one group of employees (the Saudis) in any work at any level which they are qualified to perform. But work performance and value are still the criteria by which the Saudis are judged to merit promotion and not, as in a school, the successful 'passing' of training courses and tests.

The Saudi's development is in two essential parts: work experience and specific training. This is unusual in the industrial pattern only in the fact that basic or elementary training and work experience are taking place concurrently rather than in sequence.

Work Experience

The very act of performing duties under supervision and of having both to adjust to a discipline and to exercise some degree of

choice and judgment in performing even simple tasks are in themselves, of course, of educational value to those interested in self-improvement.

The quality of supervision, both from the viewpoint of the personal relations between the worker and his ' boss ', and of the competence with which the worker is directed, is, of course, the very heart of Saudi development, just as it is the heart of human relations and the proper use of human resources in industry generally. Aramco depends largely upon its American employees who are close to the Saudis, and who directly or indirectly supervise their work, to bear the primary responsibility for their development. There is a great deal more at stake than the mere learning of skills and knowledge. It is only triteness to say that such learning in itself does not make successful employees; and in the Aramco situation successful employees must be moulded from raw material in so far as industrial experience is concerned. A very great element in this situation is the fact that our Saudis are being guided in a free-world philosophy under a barrage of radio propaganda and other influences seeking to lure them down the road of apparent benefits through coercion and strife leading into the Communist trap. There could be no greater potential tragedy in this, their day of opportunity after centuries of stalemate. Fortunately, the Saudis do not take kindly to Communism and have a passion for individual freedom no less deep-rooted than our own. The danger, as in other free countries, lies in the fact that they may not be able to evaluate the more subtle subversive approaches.

Specific Training

Before there was any planned training programme, many Saudi employees made considerable progress simply because their supervisors took a personal interest in helping them. However, in a large organization this approach is too erratic to be depended upon for the attainment of Aramco objectives. Accordingly, in the Aramco programme provision is made for specific training in which the trainees can give their entire attention to instruction or in which they can develop skills under an instructor with the emphasis upon learning rather than production. Our records of enrolment in training programmes apply to such specific training, and not to training received while in a normal work situation under supervision.

The nature of specific training has already been mentioned. In the shop, where skilled crafts are involved, it has been found advantageous to set up special training areas for skill development. In new shops programmed for early construction, training space is a specific part of the design. By providing for training as a normal feature of the shop facilities as well as a regular part of the foreman's responsibilities, he can supervise the ' production ' of his future manpower

just as he supervises his other work. The trainees, on their part, are acquiring their skills in a normal shop situation rather than in a school; moreover, they can develop the sense and satisfaction of being a part of, and ' belonging ' in, a group organization from the beginning of their development.

As mentioned above, related knowledge as well as skill development is provided for in the ' wage progress steps '. Instruction in related knowledge which contributes only to a better understanding of the specific operation for which the Saudi is being trained is usually given at or near the job site, and classrooms for this purpose are now a common part of the picture in Aramco industrial areas. But if the related knowledge required is more general in nature, or if the training needed at any time by various units can be advantageously consolidated, the foreman or supervisor may assign his men on a part-time basis to Assigned General Industrial Training; and herein, from an educational and planning viewpoint, lies the most complex and yet perhaps the most essential part of the over-all Aramco training programme. What employees should be assigned to General Industrial Training, and how much general education should each employee receive?

General Aspects of Knowledge Training

A prosperous country like the United States can afford to be lavish with educational opportunities. Elementary education is compulsory, and secondary and even higher education is available to a very large segment of the population. The cultural advantages, as well as other advantages of prosperity are enormous. But if we ignore the cultural advantages and consider only the opportunities for personal advancement, we see that the structure of industry, the structure of government, and the structure of society itself are still pyramidal in form. Notwithstanding the large extent of general education, the great mass of workers in large industries are in hourly-paid jobs which have been greatly simplified and in which they combine their efforts through a detailed pattern of work organization and co-ordination. This has greatly contributed to their productivity and to the high collective level of production.

The opportunity to move upward, or to commence employment at a comparatively high level, in the organizational pyramid depends to a large degree, of course, upon education and training. This is true, for example, in types of work for which well-rounded, skilled craftsmen are needed; and it is particularly true in management and professional positions. However, the opportunity for advancement does not depend entirely upon education, and education in itself does not guarantee advancement. For positions carrying important responsibilities, there is no real substitute for the wisdom and knowledge that come from experience. But, generally speaking, in the final analysis the opportunity for advancement depends primarily

upon ability, and the organizational structure is a reflection of individual differences as well as of degrees of education and training. It is true that there is a great deal more work at the bottom of the pyramid, but it is also true that there is always a scarcity of real talent at the top.

Ability, as the expression is used here, is a combination of many things: integrity, intelligence, resourcefulness, dependability, stability, loyalty, and the willingness to exert the effort which is essential both to good training and to good performance.

In applying this analysis to Aramco, if pre-employment education were more general, Aramco's training problem and the current distribution of work between Saudis and foreigners would be greatly helped, but it would not guarantee any individual Saudi that the level of his position would be any higher than determined by his ability, interest, and experience. The general structure of the organization above the points where skills in simple jobs come into play would not be greatly altered. This structure is determined by the amount and organization of the work involved. On the other hand, the distribution of individuals within the structure of organization is a matter of individual differences coupled with skill, knowledge, and experience.

Aramco is not in the business of education for general cultural purposes and was not brought to Saudi Arabia for that purpose. Simple literacy, of course, is generally beneficial, and the workers should have enough related knowledge for an understanding of their work; but for the larger proportion of the Aramco jobs not a large amount of general knowledge is needed. This will be increasingly so as Aramco is able to stabilize its operations after a period of rapid expansion, and organize its work as much as possible in the American industrial pattern of job simplification, which will mean greater efficiency for the company and offer the best opportunity for the majority of the individual Saudi workers.

Furthermore, adult education is obviously a different proposition in many respects from the education of children who must go to school whether they like it or not. The Saudi who can find great satisfaction in driving a tractor, for example, or performing a routine, simplified job in a plant or shop, is not likely to be greatly interested in classroom learning. If he is a truck driver by choice, he may willingly acquire enough knowledge to enable him to check his weights and prepare simple forms and even, perhaps, to understand the problems of the care and maintenance of his equipment; but he is not likely to be interested in knowledge for the sake of knowledge as such. On the other hand, the individuals who have the intelligence and other inherent qualities for higher levels of success are likely to be precisely the individuals who will apply great interest and effort in learning if they have the opportunity.

The primary purpose of the general knowledge side of our train-

ing programme is to give the more able Saudis the opportunity to progress to the limit of their potential, and what this analysis boils down to is that we must be able to identify these individuals as early as possible and preferably while they are still in the raw-material stage. If they are to become rounded craftsmen, for example, or perhaps are destined for supervisory, managerial, or professional jobs, we must see that they receive the essential general education as they go along while they are still young both in age and in company service.

The process of selection and selectivity must play a large part in the entire Aramco training programme. On the one hand it is wasteful, pointless, and even harmful to offer through surplus training a prospective prize of advancement to an individual who does not have the qualities to succeed beyond his present level. It is better for all concerned to make him happy in a job that suits him. On the other hand, through the process of opportunity and evaluation it is possible for a Saudi to receive successively the essentials of elementary, secondary, and college education to help him qualify for succeeding steps of advancement in the company.

As far as the able Saudi employee is concerned, his lack of education in childhood only means that he will receive the amount of education needed for vocational success a few years later in life. On the other hand, if he should go through the normal process of elementary, secondary, and college education before taking a job in industry, he would still need special training and experience before reaching his potential value as an employee. Our Saudi employees are acquiring special training and experience concurrently with their education. As far as Aramco is concerned, it has a burden of general education which an industrial company does not normally have to provide, but its investment in employee development is applied to selected individuals who are likely to succeed and be able competently to fill many positions in a Saudi Arabian industry now occupied by foreigners.

Training Assignments Outside Saudi Arabia

About one hundred and forty Saudi employees have been sent outside the country on training assignments, some of them more than once, since 1948. Some of these assignments have been to training centres for the indoctrination of new American employees located at Riverhead, Long Island, from 1948 to 1951 and at Sidon, Lebanon, since that time. These assignments have involved both duties as Arabic instructors of American employees and special instruction of the Saudis in academic subjects. Ten-week summer-school programmes for selected Saudis were inaugurated in 1949, when forty Saudis were assigned to the American University of Beirut for intensive instruction in academic subjects. This programme has been continued in subsequent years and has served the

various purposes of special training, of broadening the horizon of the men involved, and of one means of selecting candidates for Aramco's Saudi Scholarship Programme, established in 1951. Under this programme, twelve Saudi employees were enrolled at the end of 1953 as undergraduate students at Aleppo College and the American University of Beirut.

Summary and Appraisal

The above discussion, with the omission of details, is intended to give a general view of the Aramco training programme for Saudi employees.

It would not be correct to say that the programme has grown like Topsy, for there has been a general conception to guide it; but it is true that changes and refinements have had to be made as experience has been gained, and this process is still going on. The point is that we shall end up with a programme which is the proper way, indeed the only way, to meet the requirements of our particular situation.

There was no formal training programme in the early pre-war years of Aramco's existence. The only training that Saudis received was at the hands of their American supervisors. Much of it was very good. But, realizing the great handicap of illiteracy, in 1940 Aramco opened some modest evening schools for Saudis of all ages, employees and non-employees. In 1944 Aramco brought its first professional American educator to Saudi Arabia to take charge of the schools, and, under his direction, the so-called *Jebel School* in Dhahran went into day-time operation for young employees on a part-time basis. But it also enrolled non-employees who chose to come, and this led to a concern on the part of the Government that Aramco was engaging in the education of the young without including religious instruction. The latter being outside the province of an oil company, arrangements were made for Government teachers to take over part of the curriculum. The upshot of this arrangement in practice was that the school was serving the purposes of neither the Government nor the company and accordingly, at the end of 1949, Aramco decided that it should confine its efforts to the training of employees for Aramco work and that education for general purposes should properly be the responsibility of the Government. There can be little doubt about the soundness of this decision.

The present programme was based upon recommendations of a so-called Personnel Planning Committee which made an exhaustive study of Aramco's employee-relations problems in 1949. These recommendations, in turn, were formulated out of a review of experience.

Since that time, the changes and improvements that have been necessary in the guidance of the programme have been efforts to correct the imperfections of implementation which could be expected in imposing a complex educational problem upon a very busy

operating organization. There are still many imperfections, and gaps are being closed as they are observed. For example, the requirement that heads of individual organizational units should prepare Unit Training Programmes in writing after a study of their training problems was an innovation of 1953, as was the change in Advanced Industrial Training mentioned above. The quality of staff work and planning that have gone into the preparation of many of the Unit Training Programmes has been excellent, and the results of having a definite plan of action to follow are bound to appear.

There is still a great deal of room for improvements in training methodology, including improved training materials, instructor training, and the use of audio-visual and other training aids. However, these refinements can properly be applied only after a process of detailed job analysis and planning which Aramco has been going through in recent years.

An educational and training programme of this kind, which is closely integrated with industrial operations and administration, is not easy either to describe or to comprehend, as compared to the usual school-system approach.

It cannot be said that the over-all conception of the training problems which the writer has presented above is seen in the same way by many people in the Aramco organization who give less thought to training. In some respects it may be a conception of the writer himself. But there has been a unanimous management belief in the importance of assisting Saudis to participate in various aspects of the Aramco enterprise. It is probably significant and only natural that the philosophy, and particularly the American philosophy, of individual opportunity commonly referred to as 'free enterprise' runs all through the Aramco approach to training. It is also signi-

	1950	*1951*	*1952*	*1953*
Job-skill, assigned GIT, pre-job, and other specific training during working hours . . .	2,699	3,278	5,235	6,319
Supervisory, instructor, and specialized training during working hours	207	333	286	274
Total assigned enrolments	2,906	3,611	5,521	6,593
Voluntary GIT .	860	1,147	1,374	1,429
Campaign against illiteracy	—	—	—	1,318
Total enrolments	3,766	4,758	6,895	9,340
Minus duplications	602	482	634	1,105
Avg. number receiving training	3,164	4,276	6,261	8,235
Average number Saudis employed	9,729	12,003	14,242	14,137

ficant that it is this philosophy, rather than a philosophy of philanthropy or altruism, which motivates Aramco to help Saudi employees to help themselves.

The enrolment figures in all training programmes for Saudis, by yearly averages, since the beginning of 1950 are shown in the table on page 533.

As previously mentioned, enrolment in programmes of these kinds varies from time to time, and yearly averages do not give a true picture of enrolments at any one time. However, they give the best indication of trends.

The results of training are best reflected in the shifts of Saudis from one grade to another. In the Aramco wage ladder, workers in Grade 4 are getting into the skilled category, though the skills may be of low degree and are in a narrow field. In Grade 5, the skills are of a higher order, though still fairly narrow in field, while in Grade 6 the workers are expected to be reaching journeyman status or the equivalent. In 1949, the Personnel Planning Committee established goals which were on the optimistic side and were predicated upon effective implementation of a recommended programme. It was also predicated on an assumption that Aramco's further expansion would be at a very much lower rate, and that operations would be more stabilized than they have proved to be. Nevertheless, it is interesting now to compare the results with the predictions:

	End 1949	*End 1953*		*Goal, 1954*
	Actual	*Actual*	*Goal*	
Grade 6 and above	80	742	866	975
Grade 5	301	1,373	2,055	2,081
Grade 4	1,263	2,897	1,727	1,684
TOTAL Grade 4 and above	1,644	5,012	4,648	4,740

In the four-year period, approximately one thousand two hundred Saudis in Grade 4, two hundred and fifty in Grade 5, and one hundred and thirty-five in Grade 6 and above have left the company's service for various reasons, chief of which is to go into business or other employment. While Aramco naturally likes to retain its trained employees, we are fully reconciled to the outside demands for skilled workers, and many of those who leave go into private industry which the company is helping to stimulate.

It will be noted that the total numbers in Grade 4 and above are higher than was anticipated even one year hence. The fact that the numbers in Grades 5 and 6 and above are lower than the goal probably results from over-optimism in predicting the rate at which

a programme of this kind could gather momentum. Actually, the steepening curve of upgradings as the Aramco programme is being perfected indicates that the 1954 goal in Grades 5, 6 and above might still be reached: or nearly so.

In a country in which general education itself is very new, it could not be expected that there would be more than a sprinkling of Saudis qualified for higher-level jobs requiring a secondary and college education. This is indeed the case, but there are a few and the numbers will increase as time goes on. The twelve Saudi employees now taking courses in Middle Eastern colleges are the products of Aramco's own training programme supplemented by special preparatory school help from the colleges. A few Saudis who have received a secondary or college education before employment have joined Aramco, and it is hoped that there will be increasing numbers in the future.

It is beyond the scope of this article to make more than scant mention of the special training of American employees, which is important for their role as representatives of American enterprise in Saudi Arabia, and highly important also as a means to an end in the successful development of Saudis. It must be sufficient to say here that all new American employees receive an indoctrination course of two weeks to one month in a training centre at Sidon, Lebanon. This is devoted to general orientation, basic supervisory training, and an intensive introduction to colloquial Arabic. In Saudi Arabia, the company has an elaborate plan for language training which presents a complex problem, both because the language is difficult and because the trainees are busy and preoccupied. The company is also presently embarking upon new programmes of supervisory and management development which will embrace, in one general group, the first-line supervisors of Saudi employees and in another general group members of management from the rank of foreman upward.

ROY LEBKICHER.

[Mr. Roy Lebkicher is Head of the Training Division of the Arabian American Oil Company in Dhahran, Saudi Arabia; a petroleum geologist, he was formerly an executive in the Standard Oil Company of California and later Assistant to the Executive Vice-President of Aramco. A brilliant and original educational thinker as well as an able and experienced executive, Mr. Lebkicher is himself responsible for much of the training policy of the company which has produced this outstanding success in technological development.

THE EDITORS.]

CHAPTER NINE

THE CONTRIBUTION OF IRAQ PETROLEUM AND ASSOCIATED COMPANIES TO GENERAL EDUCATION AND INDUSTRIAL TRAINING IN IRAQ

WHERE the Iraq Petroleum Company operates in areas remote from the normal public services of the country, it has built and equipped primary schools for the children of its Iraqi employees. These measures are exceptional, and have been adopted with the approval of the Iraqi Ministry of Education, on whose prerogative to provide educational facilities the company in no way impinges.

The schools which have been established in this way are supervised by the Iraqi Administration, which provides the teachers for them and pays their salaries and allowances, the company adding special allowances to bring their total emoluments into line with those of its own employees of equal status. Where possible, the company also provides free living-accommodation for both bachelor and married teachers, and, to certain bachelor teachers living in company messes, provides free messing.

The company has built five modern primary schools in Iraq—four at its pipeline stations and one at its water-pumping station on the Lesser Zab River. Locations and present numbers of pupils and teachers at these schools are given below:

Location	*Pupils*	*Teachers*
Lesser Zab Water Pumping Station	112	6
K.2 Oil-pumping Station	169	6
K.3 Oil-pumping Station	369	12
T.1 Oil-pumping Station	85	5
H.2 Oil-pumping Station	40	3
TOTAL	775	32

Successful pupils from these schools can continue their studies at government secondary schools in neighbouring towns. At the present time secondary schools are available at Kirkuk, Ramadi, and Anah, and an intermediate secondary school at Haditha.

The company has also built and equipped a kindergarten school for sixty children of its foreign staff in Kirkuk, and the three foreign

teachers there are both employed and accommodated by the company.

The major contribution of the oil companies, however, lies in technical education and industrial training. To technical education they have contributed in the following manner: to the Government Technical School in Baghdad, the Iraq Petroleum Company has given ID.8,000 [1] worth of equipment; and to that in Basrah, the Basrah Petroleum Company has given two grants of ID.2,000 each and also some instructional equipment.

In the second place, and under a concessionary obligation, the companies finance a scheme whereby the Ministry of Economics sends fifty students to the United Kingdom every year, subject to a maximum of two hundred and fifty students under training in any one year. These students, provided that they satisfy the standard required, remain in the United Kingdom for higher education and technical training for a period of five years. It is estimated that by 1955–6 the annual cost to the three companies will be ID.175,000—or about ID.700 per student per year. Upon their return to Iraq, these students can work for either the government or the oil companies, either of which they must serve for twice the number of years they have spent in the United Kingdom.

As education in Iraq generally improves, so will the advantages of sending to the United Kingdom some of the best of the government-selected students be more clearly seen. The scheme, if wisely implemented, should considerably increase the number of competent Iraqi executives.

Industrial Training

It is, however, in the sphere of industrial training that the companies have been able to exert their most direct effort. Here, enlightenment and self-interest go hand in hand. It helps Iraq to have well-trained and well-paid men; it helps the companies to have zealous and skilled workers.

Since Kirkuk is now an established oil-field, it is there that the most impressive developments can be seen (the fields at Basrah and Ain Zalah are still relatively in the exploratory and development stage). In Kirkuk, ID.60,000 have been spent on a carefully planned industrial training centre, now in an advanced state of construction and to contain ID.30,000 of equipment; and ID.25,000 on training workshops, to contain a further ID.10,000 of equipment.

The six training schemes at Kirkuk can be classified as follows:

Apprentice Courses (five years)

These courses were instituted in 1951. Apprentices are recruited between the ages of 15 and 16 years at the rate of sixty per year, with

[1] Approximately £1 = 2·8 U.S. dollars = 1 Iraqi *dinar*.

a maximum of three hundred. At the present time there are a hundred and twenty-four apprentices undergoing training. The curriculum of the first two years consists of instruction in English, Arabic, mathematics, science, engineering, laboratory and workshop practice. The following years are spent partly at the industrial training centre and partly in departments within the fields. Apprentices who complete the full five years of training will be entered for an examination of the standard of ordinary National Certificate, or City and Guilds Certificate, or Royal Society of Arts Certificate, thus relating this training to accepted standards of industrial and commercial training in the United Kingdom.

Artisan Courses (two years)

These courses were started in 1948. Twenty artisans are selected, every year, with a maximum of forty, although that figure may be increased at a later date. The first six months are spent at the industrial training centre; during the remaining eighteen months the artisans are attached to a department at fields and continue their work at the centre on a day-release system. In this way adequate emphasis is placed upon practical training.

Commercial Courses (nine months)

These courses, for which twenty trainees are accepted every year, include English, Arabic, general knowledge, commercial knowledge, typewriting, book-keeping, and office methods.

Voluntary Evening Adult Courses (up to a maximum of forty weeks in any one year)

These classes, designed for Iraqis who have never served an apprenticeship, are based on departmental requirements for trained men and enjoy considerable popularity. At the present time they are attended by some three hundred and thirty employees, with a maximum of five hundred. Subjects include typewriting, commercial practice, accountancy, mathematics, chemistry, physics, mechanics, M.T. fitting, Diesel fitting, and plumbing.

Training-within-Industry (weekly courses)

These are designed for foremen, supervisors, and executives. Subjects include job instruction, job methods, and job relations; about twenty-four men a week are instructed in two courses of ten hours each.

Training Courses in the United Kingdom

Under this scheme, which is proving very successful, ten to twenty men are sent to the United Kingdom every year for specialist trade courses of six months' to two years' duration.

Although these courses apply primarily to Kirkuk, there are sixty

men taking artisans' Basrah and a further eighteen at Ain Zalah.

While these various systems of training, undertaken with the full co-operation of the Iraqi Government, are directed primarily by the technical requirements of the companies, at the same time they enlarge the horizon of the Iraqi worker and help him take his place in a progressive world, thereby offering a significant contribution to the education of the country.

Contributed by
Iraq Petroleum Company.

CHAPTER TEN

AN EXPERIMENT IN VOCATIONAL TRAINING

DURING the past ten or fifteen years much investigation and experimentation has been carried out in the field of tropical American agriculture and animal husbandry. Working in collaboration with local governments and local technicians, such organizations as the Rockefeller Foundation, the Office of Foreign Agricultural Relations of the United States Department of Agriculture (now the Foreign Agricultural Service), the Institute of Inter-American Affairs, the Food and Agriculture Organization of the United Nations, as well as corporations such as the United Fruit Company, have taken part in this highly significant movement. As a result, tropical America now has available better plant materials, a better understanding of rational utilization of the land, and better methods of production.

How shall we make the materials already assembled, and to be assembled in the future, available to the small farmer?

He must, some will say, be educated. That answer is too simple. In the first place, his name is legion. We should be thankful for this. In the second place, who is going to educate him? The technologists cannot do it: there are not enough of them; they are too busy with their research and experimentation, and many of them do not have the background, the training, to gain the confidence of the small farmer and influence his operations. In other words, they do not speak his language.

Publications? Yes, to a limited extent. It has been our experience that they are not as effective as we had hoped and expected. We would by no means belittle their value and importance, however.

Samuel Zemurray, during the time he was president of the United Fruit Company (and even before that), became convinced that the best way to help the small farmer in Central America was through vocational training. He realized that it would be a slow process—slow because there are so many thousands of young men in tropical America who need this kind of education. But he saw no better way of carrying to the farmer the techniques of modern agriculture than through practical training right on the land, in a climate where the crops the student grew were those he would cultivate in later life, where the principles of animal husbandry he learned were those he would apply later.

Escuela Agricola Panamericana

A site was chosen in the uplands of Honduras, not far from the capital, Tegucigalpa. Here was established in 1942 a school to which was given the name *Escuela Agricola Panamericana*, since it was planned to take students from ten or twelve countries, not only to influence as wide an area as possible, but also to encourage a spirit of pan-Americanism. It is the purpose of this brief paper to review the work of this school, in the hope that the record may indicate some of the things education can do towards putting into practice the results of the extremely valuable work accomplished by the technologists.

Escuela Agricola Panamericana started out with a simple philosophy, outlined by Mr. Zemurray in his characteristically simple manner. You learn to run a farm by running one, and while you are doing this, you learn in the classroom the *why* of doing things a certain way. The practical part was to come first, and from the start it *has* come first: no doubt about that.

The site chosen lies in a valley, at an elevation of 2,500 feet, but the property of the school extends up the mountainside, through pine forest, to an old volcanic peak 6,500 feet high. The soils on the valley floor are typical of vast areas in the uplands of Central America—that part of the isthmus in which most small farmers have lived since colonial times. The climate also is representative of a large area: six months of rainfall followed by six months of extremely dry weather during which irrigation is necessary. We like this feature because we think the future of many parts of tropical America is tied up with irrigation. Our extensive pine forests offer an opportunity to train young men in rational rather than destructive exploitation of the timber resources of tropical America. We believe the forests of this part of the world will prove of immense importance as the years go by.

We planned the school for a hundred and sixty students because we had been told that it is impossible to provide good vocational training on a mass-production basis. Experience has made us feel that this policy is sound; but at the same time we regret that it is not practicable to receive more students, for the demand is great. It should be mentioned, in passing, that Mr. Zemurray wished to make our training available to Latin-American boys without regard to their financial situation, hence no one pays for his lodging, food, clothes, books, or other necessary equipment. The cost of operating the school is high—at present about $275,000 [1] per annum—which means that when a student graduates, he represents an investment of about $5,000. All our funds come from the United Fruit Company, which views the project as one means of assisting in a practical

[1] Approximately £1 = 2·8 U.S. dollars = 6 *lempiras*.

manner those countries in which it operates: as well as several neighbouring ones.

The course occupies three years, eleven months each year. During the first year all students work in the Horticultural Department, where they acquire the skills necessary for the production of vegetable crops and the propagation and care of fruit trees. During the second year they work with field crops: the planting, care, and harvesting of corn, sugar-cane, rice, sorghums, and the like. The third year they work in animal husbandry, where they learn to care for the dairy herd, to pasteurize milk and make butter and cheese, to care for hogs and make ham and bacon, to butcher steers and cut meat properly, to treat sick animals by simple means, and to raise chickens.

All this work is done in the mornings. In the afternoons all students have classroom work in such subjects as mathematics, biology, the English language, field and horticultural crops, animal husbandry, farm management, and simple agricultural engineering.

Progress

Now let us take a look at progress and results. We have been in operation ten years. We have turned out about four hundred and forty graduates from thirteen countries.[2] We assumed at the start that these graduates would either return to their own farms, or be employed on large privately-owned farms: it has never been our intention to train agriculturists for United Fruit Company service.

Events have taken a somewhat unexpected turn. The first few years things went just about as we had expected; but towards the end of the nineteen-forties most of the Central American countries, together with one or two others we have tried to serve, began to realize the value and importance of agricultural extension. The experiment stations established in collaboration with agencies of the United States Government, and in some instances independently, were accumulating information which should be put in the hands of farmers. The development of superior planting materials, such as the corn varieties produced by the Rockefeller Foundation in Mexico, and the introduction of such things as the combine-type sorghums, better rice varieties, sugar-cane varieties of higher yield, better varieties of yuca (sweet cassava) and sweet potatoes, offered splendid opportunities to place valuable planting material in the hands of small farmers who could, without additional work or expense, increase their production or improve quality.

Extension was the crying need; but who would do the extending? There was urgently required a group of men, trained at the right level, and prepared to *show* the small farmer as well as *tell* him.

[2] Mexico, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama, Colombia, Ecuador, Perú, Venezuela, Cuba, and the Dominican Republic.

This need has been met to a large extent by the graduates of *Escuela Agricola Panamericana.* This has been a great source of satisfaction to the United Fruit Company, for every graduate who becomes an extension agent influences fifty to a hundred farmers, instead of the few neighbours he might have influenced had he gone back to his family farm, or gone to work on a large private farm. Many of our graduates now help to staff extension services or are in government service in several of the countries mentioned.

Because we do not require secondary education for entrance to our school (to do so would exclude many intelligent young men from remote areas where they have not had an opportunity to acquire it), our graduates are handicapped in certain countries because their governments require a college degree (*Ingeniero Agrónomo* in this part of the world, equivalent to Bachelor of Science in the United States) if a man is to occupy a major position in the public service. We have been able to solve this problem, in part, by sending annually several of our best graduates to agricultural colleges in the United States, principally that of the University of Florida. Funds for this purpose have been provided by the Rockefeller Foundation and the United Fruit Company. The results have been satisfactory. These superior students, upon their return to the tropics, are fully qualified and have done excellent work along the more technical lines.

In addition to training farmers and extension workers, there has been one other field in which *Escuela Agricola Panamericana* has had what we feel is a wholesome influence in tropical America. This we had hoped for from the start: it is the encouragement of other schools along similar lines. In 1951, the Government of Honduras built a school at Catacamas, which is modelled on ours and staffed entirely by our graduates. The Government of Ecuador has established one at Daule, near Guayaquil, where two of our graduates are teaching. Before undertaking to build this institution, President Galo Plaza sent three men here to make a full study of our equipment and programme. The Government of Nicaragua has a school near Managua in which is incorporated much of the philosophy of *Escuela Agricola Panamericana*; and the Government of El Salvador is now building a school at San Andrés along similar lines. All this is very satisfying and makes us believe there is a growing appreciation of the value of ' learning by doing '.

When we were contemplating the establishment of *Escuela Agricola Panamericana,* we had a long talk with Henry A. Wallace, at that time Vice-President of the United States. Mr. Wallace has had, for years, a keen interest in Latin-American agriculture. He made the remark: " If you can really teach those boys to work with their hands, I shall be happy." There has never been any problem from this angle. One of our former students of high social status (his great-grandfather and grandfather had been presidents of the

Republic of Colombia, and a cousin President at the time the boy was here) was such a hard worker that several other students were forced to remark: " Don't put me alongside Pedro Nel in the field; I can't stand his pace! "

We have mentioned that we desired, from the start, to inculcate a spirit of pan-Americanism. We feel we have been successful in this, for there have never been any quarrels between different national groups, no matter what political problems may have existed between their respective countries at the time.

While the school was being built, Mr. Zemurray remarked: " I want you to make good farmers and good citizens." We have tried to do both. Our discipline is strict, but not military. It is of course natural that boys between the ages of 18 and 21—especially if they have enjoyed a great deal of freedom at home—do not particularly like discipline. But they accept it, provided they are convinced no injustice is involved; and in time they almost invariably come to appreciate what they have gained from the discipline here.

For example, one of our students (who later was sent to the University of Florida, where he graduated with honours) came into our office the day after receiving his diploma. " Now I am no longer a student of yours, and I can tell you what I think," he said. " Of course," we replied, expecting that he was going to vent his pent-up complaints. " Well, I want to tell you two things. First of all, don't worry when students complain about the food. That is natural. Nobody likes indefinitely any food except that of his own home. And secondly, don't relax the discipline. If you do, this school will not continue to turn out men."

WILSON POPENOE.

CHAPTER ELEVEN

UNILEVER IN THE BELGIAN CONGO

When, in 1911, the first Lord Leverhulme (then Mr. William Lever) concluded an agreement with the King of the Belgians granting concessions of land for developing the Congo palm-oil industry, he undertook far more than merely introducing good husbandry. For one thing he determined to produce soap from oil milled in his own Congo factory within a year, and that meant no delay in moving masses of machinery and heavy equipment from Europe to Matadi and then, by the most primitive of methods, seven hundred miles up the Congo River.

The speed of the operations, launched on Africans quite undisturbed by day-to-day or even month-to-month contact with white men, multiplied many times the effect of this brusque introduction of industrialization to their agricultural existence. The social effects were numerous and complicated, but the wise foresight of Lever and the Belgian administrators harnessed and controlled the shock and ensured that the development of the essentially modern industry was matched by the development of the Africans who manned it. The whole success of the enterprise and preservation of the capital involved depended on their good work.

Just as he pioneered social welfare for his employees in England, as a monument to which stands Port Sunlight, so did he pioneer the same provisions for his African staff. The housing estates for families, the comprehensive medical services, the food, the free clothing issue, and last and most important, the regular and fair wage for a fair day's work, were benefits of civilization never dreamed of by the backward peoples on whom they were now showered.

These were innovations which had a far-reaching effect, but on a personal scale.

Educational Facilities

The introduction of educational facilities for African children was of greater national importance.

Under the terms of the agreement, the concessionary company, *Huileries du Congo Belge,* accepted certain legal obligations. One of these was to establish and maintain *one* school in each of the five areas leased for the development of the palm-oil industry. There was therefore compulsion, but in a direction which fitted in with Lord Leverhulme's own ideas.

To-day the Congo is unrecognizable as the Congo of 1911, and the education clause is archaic. It has not been revised, although the Convention itself was reviewed in 1920 and again in 1938 and amended to bring the concession clauses into line with reality.

But to have kept rigidly to the specification of five schools would have been contrary to the original intentions and contrary to the company's policy and practice in human relations. The spirit of the agreement has been kept to the letter at a capital cost of 8¼ million *francs*, and now the company has many schools established for diverse purposes to assist in the education of their staff, 26,280 strong, and their children.

These can be shown simply in the following table:

Type of School	*No. of Schs.*	*Subjects covered by Syllabus*	*Duration of Course*	*Total No. Students*	*Concession in which Located*	*Annual Cost*
Primary	5	Normal	6 years	1,176	1 in each concession area	£12,410 (1,737.900 frs.)
Secondary		Normal	4 years	173	1 in Alberta 1 in Leverville	£7,960 (1,114.830 frs.)
Post Primary						
(a) *École Professionelle*		Clerical work: typing: carpentry: joinery	3 years	98	Alberta	£2,800 (392.000 frs.)
(b) *École de Travail*		Carpentry: blacksmith trade: leather work	2 to 3 years	80	Leverville	£1,160 (162.300 frs.)
Agricultural		Plantation assistant	2 years	12–20	Alberta	£7,020 (982.700 frs.)
Engineering & Chemistry						
École Technique Supérieure		Technical engineering chemistry: electricity: motor engineering		29	Leverville	£6,920 (968.900 frs.)
Accountancy		Elementary and intermediate based on company system			Leverville	£2,140 (300.000 frs.)
		Typing: clerical work: accountancy	3 years	37	Brabanta	£790 (111.000 frs.)
					TOTAL	£41,200 (5,769.600 frs.)

Note: No schools have yet been established in three new districts of Yaligimba, Gwaka, and Mokaria

This imposing table of achievements shows clearly that H.C.B. has done more than honour its obligations, not only legally, but also morally, to the people of the Congo, who have provided such assistance in the growth of the company to its present stature and prosperity. But this table by no means represents the sum total, nor does it reveal every detail of the picture of the company's part in the efforts to promote the forward march of the Congolese towards maturity and full development. It is of interest to take a closer look at a few of the schools mentioned in the table above.

[1] 100 Belgian Congo *francs* = 14*s.* 4*d.* = 2 U.S. dollars.

Types of School

First there is the type of school which trains the specialist staff for the company, for example, the Technical School for Artisans at Alberta.

The high regard in which this school is held throughout the colony is due principally to the achievements of its founder and late head, Father Dereume, to whose name is attached such prestige. There is a staff consisting of two Belgian missionary fathers and one brother assisted by African instructors trained in the school.

Here are trained the skilled craftsmen—carpenters, blacksmiths, joiners, cabinet-makers, and also senior office staff. A four-year curriculum is planned with a dual purpose—to train real craftsmen who take a pride in their product, and to create honest and worthy citizens. There is ample evidence of success in each direction.

Perhaps the finest example in Africa of any specialist training scheme for Africans provided by private enterprise is the advanced Agricultural Social School established by H.C.B. near Alberta. Like the original oil-milling factory, like Father Dereume's vocational school, it was the first of its kind in the colony, and is further evidence of the pioneering spirit exemplified in the growth of H.C.B.

Founded in January 1947, it has as its object the training of selected Africans to a degree of theoretical and practical knowledge necessary to assume complete responsibility for a 1,250-acre plantation. During the two-year course each trainee is housed comfortably, clothed, fed, paid on a very generous scale, and provided with full opportunity for religious practice, sport, other recreation and study. Furthermore, he is assured of a well-paid, permanent, and responsible job on successful completion of the course. The cost to the company, per trainee, is slightly more than that of sending a boy to a good public school in the United Kingdom.

The other type of establishment is one that is not confined to educating potential staff for the company. One such is the secondary school for girls at Alberta, probably the most effective rebuttal to any who might perhaps regard H.C.B.'s expensive educational programme with suspicion. It shows the fallacy of the argument that the company's policy is largely intended for its own benefit, i.e. the creation of a trained body suitable for recruitment into its own ranks.

The girls' school is under the direction of the canonesses of St. Augustin d'Heverle. The curriculum is similar to that in equivalent schools in Belgium, but is adapted where necessary to suit the African girls' requirements. The need for practical subjects in the education of African girls is recognized by the inclusion of a course in domestic science and hygiene.

H.C.B. has also created a number of organizations which are additional to their obligatory duties, but which nevertheless lay

claim to having general education as their *raison d'être*. Classes are run in the main centres, for example, for African girls and women in sewing and knitting. At Alberta there is an orphanage for African children, entirely supported by the company.

Social Centre

But its principal, and most striking, effort has been to build what is usually called a social centre in Leverville, a centre for encouraging community spirit. To call it a social centre is not quite a misnomer, but the scope and facilities provided are far wider than would usually be associated with the usual organization of the same name. It is designed to cater for the fair number of children who fail to complete the six years of primary education. Normally, these children would be left to their own resources until they reached the ages where boys could work and girls could marry. Such children, provided with no constructive alternative, could easily become a source of social troubles in the towns.

To-day, after its humble origins in a garage, the centre comprises two large workshop buildings for boys and a large workroom for girls. Boys receive elementary training for such trades as mechanics, carpet-makers, wood-workers, etc., the guiding principle behind the instruction being always to instil a sense of pride in skilled manual work. Girls are taught to sew, to knit, and how to make simple garments; and there are also plans to add a practical school of housekeeping and family hygiene.

The centre is regarded as one of the most successful efforts yet undertaken by a private company to meet the needs of an urban African population.

Conclusion

The H.C.B. programme is significant in its size and effect and provides education in its purest form. Beyond it there is the responsibility of meeting the desire of the many Africans employed by the company to develop social conscience, to raise their standards of personal and communal hygiene, to participate in collective friendship, and encourage community feeling.

This, too, is education, by contact, experience, and example, found in the company's employment, the education for good citizenship that will stand the Belgian Congo in good stead in the years of progress towards full maturity.

A CORRESPONDENT.

CHAPTER TWELVE

THE RURAL DEVELOPMENT PROGRAMMES OF THE AMERICAN INTERNATIONAL ASSOCIATION FOR ECONOMIC AND SOCIAL DEVELOPMENT

THROUGHOUT most under-developed areas of the world a strong ferment of new ideas and attitudes is brewing. Whatever the form of expression, and almost irrespective of the symbols around which the turmoil coalesces, these various social movements appear to have one thing in common: a large part of their motivation springs from an increasingly articulate desire of the common man to raise his level of living.

The large and well-developed countries of the world are responding to this ferment in various ways. One important way has been to inaugurate new, or greatly expanded, programmes of economic and technical assistance. The largest and best known of these programmes are the concern of governments, or of international agencies financed by the great powers. There is, however, a growing number of privately financed agencies entering the field. One of these is the American International Association for Economic and Social Development.

The American International Association for Economic and Social Development (AIA) was organized in 1946 by Nelson Rockefeller and other members of the Rockefeller family as a private non-profit corporation to serve people of under-developed areas of the world by showing them what they can do to help themselves.

AIA began its programmes on the assumption that it is a responsibility of more fortunate men or nations to help people of less-developed areas gain the advantages which the former enjoy. Education is the most important instrument of achieving this purpose, although education as AIA uses it must be thought of in its very broadest sense and its widest application.

Basic Questions in Technical Assistance

In connexion with any technical assistance effort, two types of questions have to be answered.

The first of these can be summarized as: To what segment of

economy should additional resources be allocated in order to increase most efficiently the productivity of the whole economy?

In practically all under-developed countries there are many things which might well be done. Usually, a brief motor-trip over the best roads reveals at least a hundred possible projects to which assistance could be directed. Moreover, on such a trip anyone who intimates he is in a position to initiate some kind of technical-assistance activity will probably be swamped by people, each with his own panacea. There is no problem in getting started on something. The crucial problem, however, to the social engineer, the statesman, the administrator, and to the man who puts up the money—either as taxes or as a philanthropic gift—is to isolate areas of activity in which outside assistance can make a significant and lasting contribution, i.e. those in which relatively little foreign aid will kick-off a chain reaction of economic development.

The answers to questions in this group should be found in the subject-matter of economics.

After this selection has been made, there still remain many questions about the best methods by which to proceed. For instance, should the administering agency simply hand out money as grants-in-aid for existing organizations of the under-developed country to use in carrying forward the selected programme? Should it provide technicians as consultants or advisers to such agencies? Should it try to take over the actual direction of such agencies, and thus put its technicians in as administrators of the programme within the country? Or should it try to work out some sort of joint arrangement through which the administration of the technical-assistance programme within the under-developed country will be shared by the outside organization sponsoring it and by the agencies within the country responsible for the type of activity being developed?

Basically these questions ask: What are the most efficient techniques by which to achieve the necessary re-allocation of resources? The answers should be found in the subject-matter of anthropology, sociology, and government.

The American International Association has answered the two types of questions along the following lines:

(1) It operates on the assumption that world peace and the future welfare of all men everywhere can be enhanced by raising the levels of living of the millions of poverty-stricken people in the under-developed areas of the world.

(2) It believes that significant and lasting increases in the levels of living of these people must be brought about by increases in their productive output: not primarily by a redistribution of present production.

(3) It holds to the view that successful attempts to raise levels of productivity in under-developed countries must have the active par-

ticipation of at least some of the important economic, social, and political organizations within the country being aided.

(4) After careful study, and considerable experience, it has concluded that the greatest productivity increases, for the least expenditure of money and effort, can usually be achieved by programmes which bring relatively small doses of both improved technical knowledge and operating capital to large numbers of people engaged in agriculture: the main form of employment in most under-developed countries.

(5) It believes that the efficient and continued operation of agencies that dispense small doses of technical knowledge and operating capital to large numbers of farm people will have gradual but important effects on numerous economic, social, and political institutions, which will probably have to be modified in order to permit the development of a really efficient national economy in most under-developed countries.

Although it may take ten to fifteen years of operating experience before the validity of these assumptions and beliefs can be clearly and convincingly tested, it is possible to describe how they have been put into practice by AIA and to indicate some of the principal results that have been achieved.

Administration of Programmes

Three principles guide AIA in its method of operation:

(1) that it is the individual and through him the community that must eventually benefit from any programme of assistance;

(2) that the individual can best help *himself* in co-operation with trained personnel who demonstrate and teach him how to raise his standard of living by improving his health, advancing his husbandry, and increasing his skills in order to increase his productive output; and

(3) that for the most part this trained personnel be recruited locally, so that they not only bring to the programme a realistic appreciation of the economic, cultural, and political environment, but gradually become a nucleus of dedicated men and women accustomed to serving their fellows in practical ways.

When AIA was invited by the Ministry of Agriculture of Venezuela and the state of Minas Gerais in Brazil to start programmes of rural rehabilitation, studies of needs were made in both areas. These revealed that farmers' production not only fell short of personal requirements but was far too little to meet the demands of an ever-increasing population.

There were many reasons: the most important was that methods of production were outmoded and that the farm family was cultivating so small an acreage that it was barely able to maintain itself and only rarely had a surplus which could yield an income. Evident,

too, was that their environment made members of the family prey to all kinds of disabilities and diseases. More subtly, their traditional eating habits caused widespread malnutrition, reducing their stamina and capacity for work.

What was needed first was to increase production per worker and per unit of land; then to transfer the ensuing increased income into better living.

AIA tries to secure participation of the institutions or agencies within the host country, and sought and received financial support from private corporations: in Venezuela, the Creole Petroleum Company, the Mene Grande Oil Company Inc., and the International Petroleum Company, the Socony Vacuum Oil Company Inc., Shell Caribbean Company; in Brazil, the Corn Products Refining Company.

The terms of the second contract of one of AIA's Brazilian programmes illustrates the principle that money be contributed by AIA on a descending scale, while the money contributed by the government is on an ascending scale:

	AIA Contributions	*Brazilian Government Contributions*
1952	U.S. $75,000	Cr. 4,000,000
1953	60,000	5,000,000
1954	45,000	6,000,000
TOTAL:	U.S. $180,000	Cr. 15,000,000
		[1] U.S. $750,000

[1] Cruzeiro *contributions at the rate of* 20 cruzeiros *to the dollar.*

The joint council, or *consejo*, is an administrative instrument for carrying out AIA's programmes. The two councils in Venezuela, *Consejo de Bienestar Rural* (Rural Welfare Council), commonly known as CBR, and *Consejo Informativo de Educación Alimenticia* (Information Council on Nutrition Education), called CIDEA, work closely with the Ministries of Agriculture and the Ministries of Health, Education, and Social Welfare, as well as with the agricultural banks. In Brazil, the *Associação de Crédito e Assistência Rural* (Association of Rural Credit and Welfare), or ACAR, co-operates with the state government of Minas Gerais and the state bank.

VENEZUELA

Consejo de Bienestar Rural

CBR has at present twenty-three local work areas in six zones of Venezuela. Each work centre conducts a rural development programme through farm credit and rural agricultural education. Two machinery training centres and special studies on fundamental problems of the agricultural economy are also important related activities. Community centres have been set up to sponsor education in

practical home-making skills. They are frequently the only source of recreation in the community.

Supervised credit was initiated in 1948 as the backbone of CBR's approach to rural development problems. CBR felt that a sound combination of farm planning plus educational assistance for the borrower would permit him to undertake more economic operations and encourage the banks to look upon the small farmer as a good credit risk.

Local offices in each of the states act as clearing-houses and advisers for supervised credit. CBR local technicians receive loan applications, survey the applicant's qualifications, and suggest the size, type, and repayment schedule of the loan. None of the funds of the council is used for the loans, but the council does recommend who should have loans to the bank.

Loans may be applied to the purchase of fungicides, seeds, equipment, fertilizer, to improving livestock or repairing the farm home or buildings, or to the purchase of additional land. Agricultural technicians provide continuing supervision of the farmer's operation during the period of the loan. They schedule farm and home demonstration meetings and make frequent advisory visits, often in the company of a home economist who will assist the farm homemaker to improve her operations and skills.

Supplementing the supervised credit activities are method and result demonstrations for borrowers and non-borrowers on such techniques as seed selection, spraying plants or livestock, repairing farm and home buildings, and milk production. The community centre is the local source of homemaking information. Here the farm homemaker may learn how to can fruits and vegetables, how to cure meat, how to construct simple pieces of furniture from surplus lumber, child care, and infant feeding. Two of the centres operated by women of the community maintain breakfast-feeding stations for pre-school children.

To date, CBR has serviced almost eight hundred and fifty people with loans and ten thousand borrowers and non-borrowers with a variety of educational services.

Borrowers increased the size of their farms by 67·7 per cent. The increase in gross income was 178 per cent., while net worth went up 63 per cent.

CBR has also set up two farm machinery training centres in which farmers and farm labourers receive instruction in the operation and maintenance of all types of farm machinery. So far CBR has graduated over four hundred men from these three-week training courses.

In addition there are numerous special studies for which CBR has enlisted the short-term consultant services of prominent U.S. technicians and college professors, who have made 'plan of action' recommendations on various sectors of the agricultural economy for the

use of government ministries and private agencies working in Venezuela. Two outstanding examples are a rice study, *Rice Programme of the Venezuelan Development Corporation,* and a milk-production study, *Milk Production and Marketing in the Caracas Milk Shed.*

Consejo Informativo de Educación Alimenticia

Malnutrition in Venezuela is not limited to one class, one geographical area, or one occupation. Therefore CIDEA undertook an intensive national nutrition programme. An initial demonstration programme in a model community was soon expanded into country-wide activity with the co-operation of all media of communications.

CIDEA has enlisted the active support of the press, radio, and television facilities. Papers and magazines contribute free space for nutrition news and special features, and there is free radio time for spot announcements and a serial for children, as well as programmes for adults. The television industry is in the process of negotiating with the council for possible TV programmes on nutrition themes.

Schools have always been an important outlet for CIDEA information and materials. Nutrition courses have been incorporated into the curriculum, and nutrition clubs have been organized as extra-curricular activities.

An extensive publications programme tries, through stories and comic books, to reach children who do not attend school. For adults there are posters, calendars, marketing-advice materials, recipes, and menus. Teacher-training manuals, lectures, and courses are designed to reach the school teacher, nurse, and social worker. In addition there are mobile units that bring nutrition films to rural people in some of the remotest areas of the country. The flow of education and entertainment materials is all co-ordinated to tell a single story: balanced diet for good health.

It was estimated that during 1952, CIDEA's six services—press, radio, publications, motion pictures, mobile units, school and college and reference service—brought the story of better nutrition to an average of 1,275,000 Venezuelans monthly. A recently added service in many ways symbolizes the enthusiasm of the government for the programme and its techniques. Graduate teachers from sixteen of Venezuela's twenty states were sent by their state governments to CIDEA's main office in Caracas to receive special instruction on nutrition education and public-information techniques to equip them to be CIDEA's personal representatives in each of their respective states. They will act as information personnel to work with teachers, local newspapers, and government agencies.

CIDEA's publications include a series of comic books, *Las Adventuras de Juancito Salud* ('The Adventures of Johnny Health'). The central character, Johnny Health, is helped in his pursuits by a

Spanish-speaking long-eared rabbit, 'Chucuto', kin to Al Capp's famous 'Shmoo'. Together the pair manage to outwit all adversaries, from man-eating tigers to intestinal parasites, simultaneously extolling the advantages of a balanced diet. There have been four comic books: a total of 750,000 copies. Two more titles, totalling 400,000 pieces, will be out shortly and distributed by the mobile units and by the government through the Institute of Nutrition. Chico Carrasquel, Venezuela's contribution to national league baseball, has permitted CIDEA to use his biography to get across a nutrition message, and 1952's Miss Venezuela graced the cover of a calendar containing a permanent menu and recipe collection. To date, CIDEA has published forty-one titles totalling 6,414,500 copies, with two more titles, 1,400,000 copies, planned before the end of the fiscal year.

Free air time permits CIDEA to place spot announcements of nutrition news, food selection and preparation, a children's serial, and an adult's quiz show, *Health, Food and Money For You.* As of the third quarter of this year, fifty-four stations were donating an average of one hundred and twenty-two air hours a month.

Thirty-nine newspapers throughout the country, including dailies and weeklies, published an average of four hundred and seventy-three CIDEA items a month, including several special columns run on a regular basis.

Five sound trucks, equipped with motion-picture projectors belonging to the *consejo*, supplemented by a fleet of twenty-three used jointly by CIDEA and the Ministry of Education, bring nutrition films interspersed with feature shorts to people in rural areas who in some cases have never seen a motion picture. CIDEA has produced four films of its own and has catalogued and reviewed hundreds of others to build one of the most complete film libraries of nutrition, home economics, health, and child-care subjects in all Latin America.

Public schools also bear down on the nutrition theme. At the end of June, 1953, the total of nutrition clubs operating throughout the country was one hundred and thirty-nine, with a student membership of seventy thousand. The clubs in many cases publish their own newspapers, run contests, and sponsor exhibitions on nutrition subjects.

Individual response is reflected by the number of direct mail inquiries in a country where people do not ordinarily write such letters. Information requests now average about six thousand a year.

Inter-American Institute of Agricultural Sciences at Turrialba

In implementing this activity, AIA has come to realize that one of the greatest handicaps to agricultural progress is the lack of trained people in the service professions such as health, education, and

agriculture. To complement AIA's other rural development programmes in Venezuela, an educational agreement with the Inter-American Institute of Agricultural Sciences at Turrialba, Costa Rica, was made to train Venezuelan high school graduates in applied rural sciences.

This project began in 1947 with a grant of $158,000 to the Institute for improving the plant at Turrialba, in return for which the Institute was to give scholarships to Venezuelan students selected by a committee composed of AIA and government representatives. To date, the Institute has graduated seventy-five students under the programme and ten more are in the process of completing courses. The Institute and AIA have recently shifted the emphasis of the programme from student training to teacher training. The Institute now gives three two-year scholarships a year to candidates with an *Ingeniero Agronomo* (agricultural engineer) degree for graduate work in vocational, agricultural, and extension education and in research. Further, a reciprocal agreement between the Institute and Cornell University in New York State has been concluded whereby the recipients of these scholarships may take part of their training at Cornell. At the end of their training they get a Master of Science degree from Cornell or a *Magistri Agriculturae* from the Institute or both.

BRAZIL

In Brazil, the initial AIA pattern was slightly different. AIA was originally invited to provide certain consultative and investigative services on specific problems to local agencies which had functioning programmes of their own. From this work, a community services programme in the municipalities of Santa Rita and São José developed. Later a supervised credit and agricultural extension programme patterned on the Venezuelan programme was started in the state of Minas Gerais.

Community Services in Santa Rita and São José

The community services programme in Santa Rita grew out of a livestock-parasite control project which AIA undertook early in 1948. Brazilian cattle had always been plagued with ticks. An AIA consultant experimented with insecticide sprays until he found one that kept the herds free of ticks for at least a month. Local farmers were sceptical but were won over when the test herds gained weight rapidly and produced more milk. One of the demonstration herds was in Santa Rita, and when AIA technicians held meetings to discuss and demonstrate their sprays they were besieged with questions relating to feed, pasture, and other livestock problems. By unanimous vote, the farmers of the area agreed to contribute three days' milk receipts to cover part of the cost of a rounded community

service programme, including the services of agricultural specialists and a nurse.

With the success of the community services programme in Santa Rita, leading citizens of the neighbouring town, São José, asked AIA to start a similar programme there. The two towns thus became centres where activities sponsored by AIA were sought, and paid for in part, by the people being helped. The cost of the programmes in Santa Rita and São José is borne by the municipalities, by the Nestlé's Milk Company, by local farmers from milk receipts, and by AIA. The agriculture programme in both places consists of spraying cows, constructing trench silos to overcome shortage of silage during dry seasons, and teaching farmers how to make and use compost. Two nurseries were also started which produced and distributed seeds. Rural youth clubs also bring the lesson of better farming to local boys and girls, who are encouraged to start home vegetable gardens and corn planting and are given seeds, plants and instruction.

The Brazilian government has no financial or administrative role in these projects, but it was their success that led to the signing of a community services programme in São Paulo which provided that state agencies establish and conduct at their own expense programmes similar to those in São José and Santa Rita in twenty other municipalities of the state. AIA agreed to furnish general orientation to the twenty new programmes as well as to train personnel in techniques already successfully demonstrated in AIA's other two projects.

Associação de Crédito e Assistência Rural

In structure and purpose much like the Venezuelan CBR, ACAR is managed and financed jointly by AIA and the state government of Minas Gerais. It, too, uses self-help techniques to increase the farmers' food production and raise his standard of living.

ACAR was set up with a three-year contract, which was renewed for another three years in 1951. At the end of 1954 it will have accumulated a five-year record for intensive, all-round aid to the individual farmer, his family, and the community by means of supervised credit, extension work, medical aid, and general services.

Many small farmers in Brazil cultivate a few hectares of eroded or worn-out land. Their families live mostly in one- or two-room, mud-walled houses; their children are frequently malnourished and the whole family overworked. Low-interest loans combined with education have been introduced by ACAR to show farmers the best way of using funds to expand operations and produce a more abundant crop. Loans, through a state bank, may range from $25 to $2,500, depending on the farmer's needs as seen by the technicians who work with him. The average size of loan was $709.

The average size of the borrowers' farms had increased 6 per cent.: from 57·0 to 60·6 hectares. There was a 21 per cent. increase in net worth: from $4,494 to $5,454 during the first year after receiving the loan. Major improvements in living standards had been effected among the borrower families: beds per family had increased; farm livestock had been improved; home gardens had increased; and more than two-thirds of the borrowers now had latrines whereas less than one-tenth had them before the loan.

ACAR's supervised credit programme is supplemented by extension education for the non-borrower. Twenty-one local offices service families in forty municipalities. Extension-service technicians treat the farming family as an integrated unit dependent on and contributing to the community. ACAR workers, as a consequence, give individual assistance to the farmer and his wife when necessary but increasingly are shifting to group work, for individual problems are group problems. Practical demonstrations show the groups the value of improved methods in such common needs as ant control, cattle-feeding, and soil conservation.

Household arts such as furniture-making, canning vegetables and fruits, curing meats, and making mattresses are taught at group meetings. Hygiene instruction, supplementary feeding for children, and child-care instruction are given at community centres.

Services are planned and implemented through one main office in Belo Horizonte which manages four regional offices, which in turn control the twenty-one local offices. Under an American director are regional supervisors, two for each office; one home economist and one agricultural expert. These in turn supervise the activities of about forty-five agronomists and home supervisors.

A problem common to underdeveloped areas, lack of trained personnel, has also been attacked. In 1952 ACAR established jointly with the University of Vicosa a six-week course designed to meet ACAR's need for employees trained in farm management and home economics. Since then the university has recognized the need of home economics and extension training and has incorporated accredited courses as part of its curriculum.

Achievements

Two things are evident from the experiences in Venezuela and Brazil: first, the governments like what is being done; second, relatively few dollars are stimulating governments to channel a considerably larger volume of their expenditures into agricultural programmes. It is doubtful if either of the programmes would be continued in their present form if North American influence were completely withdrawn at the present time. However, it is clear that large financial contributions are not necessary in order to obtain significant co-operation from interested governments. In this con-

nexion, it is worth mentioning that several high-ranking government officials in both Venezuela and Brazil have pointed out that a minimum amount of AIA participation may be necessary for many years as a means of protecting the *consejos*.

In addition to the impacts which the programmes are having on government administration, a sizeable number of national technicians is learning how to plan, organize, and administer rural development programmes. They are also learning a great deal about how to convey knowledge from the classroom, the laboratory, and the experiment station to the farmer and the housewife, thus filling an important gap in their educational methods.

That the programmes are technically sound is shown by the progress that the families are making in increasing the scale of their operations, improving their farm and home practices, increasing their incomes, and raising their net worth.

The fact that governments are responding to the programme, that national technicians are being trained, and that families are making progress is a significant indication that the AIA approach is accomplishing worthwhile results. They do not imply, however, that everything is perfect or that all problems have been solved.

For instance, the lending agencies have not as yet developed into efficient suppliers of loans. A major part of the difficulty is that capital is in short supply, and the channelling of loanable funds into the hands of large numbers of small, scattered farmers is an expensive process for any banking agency. As a consequence, farmers are not able to compete with municipalities, industrialists, tradesmen, and real-estate developers for credit.

Agricultural banks are short of funds. They, therefore, resort to all sorts of delays in approving loans, to various rules-of-thumb about the amount of money that they will loan to produce a given crop, or the ratio of the value of the security to the amount loaned. These, of course, are non-market devices by which loanable funds are rationed to borrowers. They will continue to be important problems until the total supply of savings is significantly increased and made available to lending agencies. Nevertheless, a very great deal can be done in improving the mechanics of the loan-rationing system so that those farmers who do receive credit can use it efficiently. In some under-developed countries, a total revision of the banking system is in progress so that liquid savings accumulated in the cities can be effectively runnelled into rural areas.

To sum up, we can use the words of the first AIA director in Brazil when he saw the results of children's work in a Rural Youth Club contest for the best home garden. Dr. Griffing examined the efforts of the entrants and then said: " Everybody is going to get a prize. These youngsters have put in so much time and effort plus an incredible amount of enthusiasm that it just wouldn't be right if they didn't all get a reward."

It is AIA's basic contention that everybody should get a prize. If learning by doing is at all valid, then the individual, his wife, his children, the community, and finally the nation will find rewards in their own self-betterment.

Contributed by
AMERICAN INTERNATIONAL ASSOCIATION.

NATIONAL AND INTERNATIONAL ORGANIZATIONS

CHAPTER THIRTEEN

CO-OPERATION BETWEEN ENGLISH TRADE UNIONS AND TRADE UNIONS IN UNDER-DEVELOPED COUNTRIES

THE British Trade-union Movement is an experienced, mature institution. Its reputation for wisdom, tolerance, public responsibility, and courage is world-wide, its sense of international working-class solidarity is strong, and is embedded very deeply into its feelings. The protest of the Chartists was directed against the political and social subordination of the working classes by the governing classes. This feeling of protest lives on vigorously in the approach of the trade unions to their domestic problems and also to the political, economic, and social conditions affecting workers in all parts of the world, especially in the under-developed countries. Not a single day passes without the trade union movement giving some help to less experienced trade unionists. These continuously tested qualities account for the steady flow from under-developed countries of inexperienced trade unionists into England. They may not be invited here by the trade-union movement but, if they are to learn how to build up strong trade unions in their own countries, they must draw upon the wide and deep experience of the world's oldest trade-union organization, whose specialized knowledge is placed willingly and freely at the service of all trade unionists.

The Role of the Trades Union Congress

The Trades Union Congress is uniquely placed to play an important part in the development of trade unions in under-developed countries, especially in the colonial territories, because of its prestige there and the confidence which its record inspires. It is a very powerful advisory organization consisting of one hundred and eighty-three affiliated trade unions with a membership of over eight million. Its general attitude to trade unions struggling to develop in very difficult economic, political, and social circumstances is to advise them not to copy the English trade unions. English trade-union practice should be studied critically, and anything of

real value should be adapted to fit in with the conditions in the country concerned.

The main part of the TUC's work in under-developed countries is in the colonial territories. Though the TUC staff is a very small one, yet some idea of the sheer scale of the task can be seen by colonial trade-union statistics. There are more than eleven hundred trade unions, with a membership of approximately nine hundred thousand, in the colonial territories. More than half of these unions are in Hong Kong, Singapore, and the Federation of Malaya. Hundreds of these unions are no more than mere fragments when judged by English standards.[1]

The direct help given to trade unions is largely general in character. Advice is given on wage-negotiation machinery, problems of organization, national insurance, social services, pensions, cost-of-living indices, and many other matters. Colonial trade-union officials, among others from under-developed countries, are trained by the TUC. These students are sent to Maritime House, and in 1953 ten attended courses of study. They came from: Nigeria 1, Sierra Leone 1, India 2, Gold Coast 1, Mauritius 2, West Indies 2, and Indonesia 1. In addition the General Council reported that it "provided study facilities for officers of Labour Departments from Nigeria and Malaya."

Members of the staff of the TUC are sent to under-developed countries to study conditions, report, and advise. Scholarships (eight to date) are granted to trade unionists from colonial dependencies. Literature to start libraries has been sent abroad, and more than £100,000 has been given to promote the cause of trade unionism.

Obviously this work barely scratches the surface of the problem pending solution in the colonies and elsewhere: much remains undone. The General Council realize that trade unionists trained here should go back among their own people as 'missionaries', and should educate for effective, responsible trade unionism by training locally trade unionists who should then train others. In this way an informed and responsible membership can be built up. To build an efficient class of officials is a main aim of TUC policy in these areas. It is, however, one of the most difficult tasks in the world to-day, for trade-union organization is neither well-established nor efficient in technologically backward countries. Only a beginning

[1] Unions in Singapore membership: Bukit Timah 11th Mile Employees' Union 58, Cantonese Rattan Workmen Benevolent Union 171, Cantonese Restaurants Staffs' Union, Singapore 73, Chinese Journalists' Union 32, Chinese Seamen's Union (Singapore Branch) 324, Chinese Tailors' Union 714, Commissioners-General's Local Staff Union, Singapore 216, Confederation of Singapore Chinese Engineering Tradesmen 2,630, Department of Broadcasting Employees' Union 179, English Teachers' Union (Chinese Schools) 38, Government and Municipal Labour Union 1,723, and Government Health Technical Staff Union 33.

has so far been made to build up a better one. This is brought out very clearly in the report of the General Council for 1953:

> The General Council have concerned themselves with the question of industrial relations in the various territories. In spite of the rapid growth in trade union membership, there has been no comparable development of machinery for negotiation, and consultation in most of the Colonies. Local Governments have not given much thought to the task of building negotiating machinery suitable for their different territories. The General Council consider that if the trade unions are to function properly this is a problem of immediate importance. Unless conditions are created for their effective operation, trade unions can do little to improve wages and conditions of employment.
>
> In the preliminary study by the Committee of this problem it was realised that there are a number of anomalies which must be corrected, and in this field the TUC have expressed their readiness to co-operate with the Government in finding appropriate solutions.
>
> The Committee are studying labour legislation in order to be in a position to advise the Trade Union Movement in each Territory on the best way to make their machinery more efficient and of greater benefit to their members.[2]

This is a grim, realistic, constructive statement on the present state of trade-union organization in the colonial territories.

The TUC know from experience that reducing widespread illiteracy, a main obstacle to trade-union advancement, is a stupendous task. People can be taught to read and write after a fashion, but real success depends on the general economic level.

> In communities where there is little appropriate reading material and no stimulus to write, literacy in itself may have little significance. Experience shows that in such areas individuals who are taught to read and write frequently relapse into illiteracy—unless progress in literacy is accompanied by progress in other fields, particularly in the material means of communication.[3]

The TUC, aware of the problem, are considering the preparation of correspondence courses designed for semi-literate and illiterate trade unionists. The courses will deal with basic trade-union day-to-day matters. The TUC will in due course notify unions abroad about them, and specimen courses will be circulated. Educational pamphlets in picture language are under consideration. Unions will be asked to select students, and trade-union advisers will be asked to help. Correspondence courses of this kind should be regarded as a stepping-stone to something like the Calcutta College, established by the International Confederation of Free Trade Unions in November 1952. "The main aim of the College is to acquaint active trade unionists with principles, methods, and techniques of modern democratic trade unionism."[4]

Help is also given in many indirect ways through other organiza-

[2] *Trades Union Congress Report,* 1953, pp. 212–13.

[3] United Nations, *Preliminary Report on the World Social Situation, 1952,* p. 61.

[4] *Trades Union Congress Report,* 1953, p. 183.

tions, such as the International Labour Organization, International Confederation of Free Trade Unions, British Council, government departments, and others too numerous to mention. Thus the British trade-union movement, through the Trades Union Congress, makes its contribution to trade-union growth in lands less favoured, in many ways, than England.

The Work of Individual Trade Unions

Individual trade unions also help. Trade unionists visiting this country are given access to the central and divisional offices of unions to study their methods of work. In many cases a visitor is placed under the guidance of a regional officer, and he is trained over a period of three months or more. If the trade unionist is functioning in a particular industry, efforts will be made to place him in a union, or in a specific department within a union, dealing with the particular industry. The National Union of General and Municipal Workers adopt this policy.

When the trade unionist returns home, in many cases correspondence goes on between him and the union concerned. If problems arise that are too difficult for the inexperienced trade unionist to cope with, the experienced officers of the English union will give him all the help they can.

Unions send out their journals to trade unionists in overseas countries, and such publications as the Branch Secretaries' Handbook are often sent abroad. Information of all kinds is given, and invitations are extended to trade-union students to attend summer schools. During 1952–3 thirteen members, mostly from within the British Commonwealth of Nations, attended residential summer schools as guests of the Transport and General Workers' Union. Other unions also receive guests in this way.

The Education and Research Department of the Transport and General Workers' Union has provided information showing the countries of origin, and the number of those trade unionists to whom information and advice were given, either personally or by mail, during 1951, 1952, and 1953. The numbers coming from highly-developed and under-developed countries can be compared. For example: from America 99; Germany 18; Gold Coast 6; Indonesia 17; Malaya 10; Nigeria 12; and from Norway 6.

Other unions do similar work, but the Transport and General Workers' Union probably receives more visiting trade unionists than any other union in England. Trade unionists occasionally come here at their own expense, but the majority come through governments, trade-union organizations, and government-sponsored bodies.

International Trade-union Organizations

English trade unions also work vigorously through international trade-union organizations. The nature of their contribution to the

work can be briefly illustrated by referring to what is being done by the International Confederation of Free Trade Unions, the Miners' International Federation, and the Postal, Telegraph, and Telephone International.

The International Confederation of Free Trade Unions, established in 1949 in London at a World Labour Conference, is an influential organization with a membership of about fifty-four million in seventy-six countries. Composed of one hundred and one trade-union organizations, its work is world-wide. Since 1949 its influence has grown, and the volume of work undertaken among trade unions has grown steadily. It is anti-Communist. Regional organizations of the ICFTU are actively at work in Asia, Europe, and the Americas, and it is intended to extend them to Africa, the Middle and Near East. A trade-union advice centre functions in Accra.

The broad general aims of the ICFTU can be given under four headings: (1) the promotion of world peace without appeasement; (2) strengthening trade unions to act as a deterrent to the spread of Communism; (3) giving support to colonial peoples in their struggle for national independence; and (4) it endeavours to get an ever-rising standard of living for workers all over the world.

Thus, for example, ICFTU representatives will call attention in the Organizations' newspaper, the *West African Worker*, to scourges like yellow fever, and will give prominence to the Anti-Amaryle Convention. They will bring hope to people by giving information on efforts in Gambia to combat the fever. They will stress the part played by inoculation, and point to the transference of stricken village populations to entirely new villages. A quotation from the speech of S. L. Odham at the Tenth Annual Conference of the Gold Coast Trade Union Congress will show the way trade unionists with an ICFTU outlook are thinking:

> Now let us turn and look at two very important things in our day-to-day life as citizens of this country, living under a Government that is duty bound to protect us. The two things are housing and our health services. There is a shortage of doctors, dispensers, nurses, mid-wives, hospital beds and other equipment, and, most regrettable, of drugs. The result is that it is to-day costing the ordinary worker many times more than it should cost him under normal conditions to get himself or his wife or child cured. I do not see how we could get on as a nation when the entire population is made up of weaklings. Any talk of development and high productivity falls flat on this, and I would wish that you adopt a motion in very frank and clear terms telling the authorities that you are dissatisfied with conditions and want a more realistic policy which will in a reasonably short time ensure availability of the essential facilities for keeping the nation's health. I am collecting data on the possibility of recruiting doctors from countries in Europe apart from Great Britain, and when they are ready, I will place them at the disposal of the General Council to be used in preparing a memorandum on the subject to the Government.

Efforts are being made to teach members the significance of important trade-union organizations such as trades councils. It is carefully shown that "the functions of a trade union go beyond looking after members' working conditions. There are many other matters with which unions should be properly concerned." For example, trades councils should be formed to fight for better communications, water supplies, lower rents, and for many other things vitally important to improvement in the standard of living.

The ICFTU's International Summer School held in France in 1953 discussed amongst other things: the trade-union organization of women, equal pay for equal work, problems of single and married women, and collective bargaining for women. These discussions and the ideas to which they gave rise returned to Africa and elsewhere as recommendations from the summer school, and were published by the *West African Worker,* in the September issue, 1953. In fact, one of the recommendations from the school was: "That the ICFTU take into consideration the reproduction and wide distribution of the conclusions and recommendations of the International Summer School for women." It is not possible to say at this early stage how effective this work is, but a serious, sustained, constructive effort is being made.

Collective bargaining machinery has also been improvised. For example, the Northern Rhodesian African Mineworkers' Trade Union was formed in 1948. The President and General Secretary of the union came to England in 1951 and spent two months studying trade-union practice with officials of the National Union of Mineworkers with fruitful results, because in 1952 the Northern Rhodesian African Mineworkers' Trade Union went on strike. After three weeks of well-ordered, disciplined struggle it decided to use the machinery of arbitration: a great step forward. The African miners sought the help of the Miners' International Federation: they asked for legal aid to present their case to the arbitrator. The MIF suggested Mr. Ronald W. Williams, M.P., who was for years solicitor for the National Union of Mineworkers. The African miners accepted, and the Guillebaud Arbitration Award gave them a very substantial increase in wages. Significantly, the award represents the first case of an African union getting legal aid from a white union. Also, it should do something to enhance the prestige of peaceful methods of negotiation in an environment which cannot afford the loss of resources associated with the reckless and indiscriminate use of the strike weapon: an aspect of great importance in countries with very small national incomes and low income per head of population. In this sense the action taken by the Miners' International Federation is a constructive contribution of great value, and the award is now a landmark in the history of African trade unionism.

The membership of the Postal, Telegraph, and Telephone Inter-

national reached 1,140,000 in 1953, but its influence is probably more widespread because of the kind of industries involved and because many of the personnel are skilled workers.

The International is concerned with the usual trade-union activities, but it produces a great deal of valuable information in study reports which are circulated to member unions throughout the world. In some cases these documents are voluminous, and very heavily weighted with information about general social and economic problems in under-developed countries. A massive report on the Far East was prepared by the secretary of the International, Mr. Fritz Gmür, and circulated in 1953. It gave much detailed information about the way trade unionists lived in Far Eastern countries. It was a valuable close-up of actual living conditions of ordinary working-class people.

The International is fighting vigorously in many ways against under-nourishment, tuberculosis, bad sanitary conditions in workrooms, and bad housing. In its conference discussions it attacks, with vigour, racial discrimination in the use of the lines of communication with which its member unions are concerned. The activities listed in the reports of the International are impressive, but it is difficult to be sure that they can be adequately translated into effective action in the lives of the workers. It is never easy to make a marked change in the material conditions of life when trade unions are very weak, and when they must necessarily function in environments completely unfavourable to the development of progressive social and economic policies.

Colonial Office's Trade-union Advisers

The work of the ICFTU and the English trade unions is carried on in the colonial territories side by side with the work of the Colonial Office's trade-union advisers. The Colonial Office made the first serious attempt to foster the growth of trade unions in a circular dispatch issued in 1930. In 1940 the Colonial Development and Welfare Act made provision that the law of a colony must be of such a character that trade unions could arise, otherwise it would not be possible to grant a scheme of financial assistance to that colony.

Between December 1941 and May 1942 the Colonial Office appointed the first six trade-union advisers. They were posted individually to Trinidad, the Gold Coast, Palestine, Sierra Leone, British Guiana, and Nigeria. To-day there are twenty trade-union advisers, stationed in Nigeria (6), Gold Coast, Kenya (2), Tanganyika, Uganda, British Guiana, Windward Islands, Mauritius, Hong Kong, Singapore, Federation of Malaya (3), and Cyprus. The inclusion of the Assistant Labour Adviser to the Secretary of State for the Colonies, Mr. Edgar Parry, brings the total to twenty-one. The duties, listed below, of the trade-union

advisers in the Federation of Malaya will give a good idea of their work.

(1) To encourage and assist trade-union development by educating officers and members of trade unions.
(2) Teaching appropriate methods of building up trade unions.
(3) Teaching how to draw up objects and rules.
(4) Explaining methods of collection of subscriptions and financial control, with particular emphasis on the necessity of a periodical check of contributions paid and of an annual audit.
(5) Showing how to keep records.
(6) Educating trade-union members in the principles, practice, and procedure of collective bargaining and negotiation, and indicating when it is appropriate to go to arbitration.
(7) Explaining the methods of conciliation as provided for in the Industrial Courts Ordinance.
(8) Explaining the vital importance of discipline among officers and members of trade unions.
(9) Teaching the significance of the principles of the secret ballot.
(10) Encouraging the amalgamation or federation of trade unions.
(11) The preparation of instruction pamphlets.

These duties implement significantly the central purpose of colonial policy, which is "to guide the Colonial Territories to responsible self-government" This relation can be clearly seen when it is understood that a well-developed trade union is an instrument of orderly government. And on the economic and social sides efficient trade unions promote the growth of the national income, improve human relations in industry, and strengthen the social status of ordinary workers.

Trade-union advisers grapple with ignorance, apathy, and suspicion, ancient foes of economic and social advancement, which are found not only in the ranks of the illiterate and semi-literate workers, but also in educated circles. Officers are scarce; the English trade unions are not able to guarantee an adequate supply of the right kind of trade unionist. Some are appointed and fall by the wayside. A full and adequate training for this difficult work seems called for. A great deal of their work is among trade unionists with minds carrying the deep imprint of the customs and feelings of an existing but decaying tribal social structure. Some of these officers would be helped by an effective training in social anthropology, because the backwash of tribal psychology which faces them in their daily work is something quite outside the range of their normal trade-union experience, coming as they do in many cases from an English environment. In spite, however, of many handicaps they are, in most cases, rendering useful service to the trade unions in their respective areas.

The British Council

Working in co-operation with the TUC, the British Council is responsible for bringing here from under-developed countries trade unionists, who are then passed on to the TUC for instruction in

British trade-union methods. In addition, boxes containing books, pamphlets, and other educational material are sent for distribution to many lands. During the past year, 193 boxes of books were sent to fifty countries. This is an interesting pioneering effort, and should prove to be most useful in certain circumstances. To get the most out of the service, the presence of a tutor of some kind is essential to give background guidance to the trade unionists.

Among many others, the following countries received boxes: Australia 8, Gold Coast 31, India 19, Italy 6, Jamaica 7, Norway 12, and British Guiana 7.

It is not known how widely these boxes circulate between or within unions. As an example of what goes into the boxes those dealing with *Industrial Relations* contained as materials for study a guide for the instructor, a study-group booklet, books and pamphlets providing a general background of British industry, and information on industrial relations. Aids to discussion included charts, film strip, a dramatized discussion script, a gramophone recording, picture leaflets and official and sample material.

There is one baffling aspect facing the British Council in this praiseworthy effort: who can write the right kind of literature to reach the trade unionist for whom the boxes are intended? The British Council is very much alive to the difficulties and is continuing its work in close association with the TUC.

Further Education

The Workers' Educational Association, and the University Extra-Mural Departments in Nigeria, the Gold Coast, and the West Indies, carry the vision of adult education into the trade unions abroad, particularly those within the colonial territories. The WEA explains to visiting trade unionists how it carries out its trade-union and adult educational work in this country, sends literature abroad to trade unions and to individual trade unionists, gives advice about education and books to those who write in to the central office asking for such information, and recommends tutors for work in colonial territories. Occasionally a summer school for colonial students is arranged, and visiting trade unionists are invited to WEA educational activities such as one-day, week-end, and summer schools.

The main work of the extra-mural departments is with a relatively small number of literate members, and the teaching is done in English. However, experimental work in the vernaculars has begun in the Gold Coast. The aim is to develop a better trade-union leadership, and the pattern of education is one-day, week-end, and residential schools, similar to the summer schools arranged in England. The rank-and-file trade unionists are in most cases outside the range of effective extra-mural work, and the tutors available are few in number. It takes years to build up a good supply of these scarce teaching skills. A few figures taken from the Gold Coast (which is

the most favourable example in the colonial territories) illustrate the problem. The population of the Gold Coast is 4,333,000, and the wage-earning section is about 300,000. Of these, about 215,000 are illiterate. There are 69 trade unions with a membership of 32,500. One union, the Gold Coast Mines Employees Union, has a membership of 10,123, five unions vary between 2,148 and 1,002, the rest have very small memberships. There are six full-time tutors and four organizers in the Extra-Mural Department of the University College of the Gold Coast.

Conclusions

This very brief account is far from complete, but it helps to convey some idea of the work done. A careful examination of the various organizations at work reveals that, to a marked degree, although they co-operate with one another, not one of them has any precise idea what the over-all volume of work is. There is an urgent need to co-ordinate their efforts to make each contribution to the common task more effective. It would help if the entire field was surveyed and a detailed account published of what all these organizations are doing for the trade unions in the under-developed countries. If the survey was limited, in the first instance, to the colonial territories, it would be an excellent beginning. The information when available should be sent to the trade unions in the under-developed areas to give them some idea of what is being done to help them in their work; this might encourage the unions to help us to help them more. New zones of constructive activity might emerge in the trade-union field. Such a survey would also show the need for marked economy of effort to get the best out of the resources available. It might call for a constructive concentration of effort in well-selected pilot areas, and the results obtained might well point the way to solutions of problems among the trade unions that have so far proved elusive and out of reach.

There remains the question: do trade unions in under-developed countries leave their mark on social and economic legislation, or on social conditions in towns and villages? Evidence on the point is next to impossible to collect, but the influence does not seem appreciable. The work accomplished through the International Labour Office seems to be the main channel through which trade unions achieve results in the social and economic fields in these areas. The main reason for the ineffectiveness of the trade unions is that they are atomized into tiny, weak, and inefficient organizations, without any effective collective bargaining machinery or, in most cases, a firm grasp of trade-union principles. Continuity of membership is not common throughout this vast area, and until trade unions reach a certain size the advantages of specialization do not emerge. Training in self-government, which is one of the most important results of trade unionism, as the Registrar-General, Ludlow, pointed out as

long ago as 1867, does not develop when unions are mere fragments with head offices in huts, or single rooms, and no effective staff to administer their affairs. The waste and disorder of indiscriminate strike action diminishes only when trade unions are well organized, ably administered, and strong. These are some of the reasons why the Colonial Office, the Trades Union Congress, and the employers are co-operating to help trade unions to amalgamate and federate. Otherwise their energy will run to waste in fruitless strike action and in political and nationalist excesses. The experience of Indonesia in 1951 could become widespread and chronic, when, in 541 strikes, over 319,030 workers were involved, with the loss of over 3,759,000 days of work.

This waste happens in a country where it is estimated that about three hundred and fifty thousand employment outlets must be brought into being each year. Thus, no real progress can be made with fragmented trade unionism any more than agricultural advancement can be maintained with fragmentation of land. Trade-union strength must be built up and consolidated on the basis of amalgamation or federation in under-developed countries. Trade-union officials must be trained. A membership must be built up conscious of its trade-union responsibilities. Reasonable financial reserves must be accumulated. When these things have been achieved, an opportunity has been created to enable the trade unions to become a great social force. We have not reached this stage yet, but the English unions have set themselves the task of hastening the day when this will be a fact in the colonial territories, and through the ICFTU and in other ways in many other technologically under-developed countries.

WILLIAM GREGORY.

CHAPTER FOURTEEN

THE INSTITUTE OF INTER-AMERICAN AFFAIRS EDUCATION PROGRAMME IN LATIN-AMERICA

LONG before the advent of technical assistance on a world-wide scale, the United States and various Latin-American republics signed bilateral agreements for the alleviation of disease, under-nourishment, illiteracy, and low productivity.

These are essentially economic problems. More specifically they are problems of education, in its broadest sense. Improved transportation facilities, modern agricultural equipment, hospitals and physicians to care for the sick, and increased food alone will not increase the productivity of the people, nor greatly improve the standard of living. All these material improvements can be provided by outside help without making any significant changes in the people.

The people themselves need to become involved in a programme of self-improvement. They need to increase the skills necessary for closing the gap between their production and their needs. The countries of Latin-America have the natural resources to close the gap. Their people have the intelligence, of course, to rise to the challenge of utilizing them fully. The development of the skills of the people necessary for increased industrial and agricultural production involves the educational process and has been a cardinal objective of the bilateral programme of technical assistance since their inception eleven years ago.

Host governments and United States technicians have always been in complete agreement on the broad objective of increasing vocational skills among students, industrial workers, and among agricultural workers through extension centres. Another aspect of the problem on which there has been less general agreement is the need for a higher level of general education functionally related to the needs of the people. The elimination of illiteracy is generally an accepted goal. To what end the new literacy should be used is not so obvious, for in many of the most backward communities there is nothing to read. Therefore, educational and governmental leaders need to examine the consequences of each new advance.

General education can be a great factor for increasing production. It increases the market for goods and services. The dual objective of a high level of general education for the masses and vocational

education necessary for economic development has been considered in each of the IIAA Latin-American programmes. The relationship between the two is not always clear: in the United States or in Latin-America. No amount of economic or vocational skill can be effective in a vacuum of ignorance. Nor is a great cultural education sufficient unless supported by the skills necessary for economic well-being.

The provision of these two types of education always raises a third problem, namely: the education of teachers. It means upgrading the teaching profession: a need which the United States shares with all the other American republics.

One other serious problem encountered by the missions is the production of suitable instructional materials. It is somewhat easier to prepare indigenous teachers than the necessary instructional materials.

The final problem in the co-operative programmes is one of organization. The development of an organization that makes effective use of the joint efforts, intelligence, and resources of citizens of different countries working on the same problem is an art that has been dormant almost throughout the history of mankind. The by-products of these efforts may be of greater use in the promotion of the art of peace than the achievement of the immediate objectives.

Five problems that have been the concern of Latin-American educators in the development of our bilateral programme have been enumerated. They are: (1) elementary education; (2) vocational and adult education; (3) teacher education; (4) production of instructional materials; and (5) organization. These problems will now be discussed.

Elementary Education

The illiteracy rates in Latin-American countries [1] range from 10 per cent. in urban Cuba to 80 per cent. in Bolivia. These figures are not so serious as a generation ago, and the one sure way to eliminate illiteracy among future generations is through a programme of universal primary schools.

Indigenous systems of primary education in Latin-American republics are generally society-centred. They represent the mores of the past; are concerned with the perpetuation of the *status quo*; emphasize academic achievement; proclaim the unquestioned authority of central governmental officials to control curricula, organization, content, standards for promotion, and finance; represent a classical approach to education even among Indians whose

[1] In percentages: Bolivia 80; Brazil 50; Chile 26; Columbia 56; Costa Rica 19; Cuba urban 10, rural 35; Ecuador 60; El Salvador 72; Guatemala 72; Honduras 70; Mexico 45; Nicaragua 70; Panama 55; Paraguay 75; Peru 58; Uruguay 20; Venezuela 65.

sole occupation is subsistence farming; prepare all students for entrance into the higher studies for the professions even though 95 per cent. of them are not likely to enter the professions.

The ministerial system makes it possible to institute changes quickly, but they are not always democratically conceived. The system, however, is as good as its leaders: and Latin-America has been blessed with many good ministers of education.

But the improvement of the basic concept of education is involved in the technical assistance programmes, not only in Latin-America, but in all countries (including those of Europe and North America) that would produce citizens sensitive to the opportunities and responsibilities of our times. Ministries of education and their fellow teachers in Latin-America are ready to try (and are developing for themselves) a new approach to elementary education.

Teachers and school directors there are talking about child-centred schools, human development, pupil-teacher planning, experience units, problems of the community and family living, individual differences, parent participation in curricular development, self-evaluation, growth as measured by changes in habits, and ability to think rather than promotion based upon ability to memorize. They are ready to abandon the past as the only source of what should be taught and to examine the social, spiritual, personal, and economic problems of the present as sources of guidance for curricular changes.

It is obvious to anyone who has studied these problems that low production of goods and services, disease, undernourishment, poverty, and misery are related to the kinds of schools a nation maintains for its youth. And the only way to alleviate the plight of the masses is to improve the primary schools, for these are the only schools which the masses attend.

Hence in Ecuador, Peru, and Bolivia the nuclear school—an idea that originated in the Ministry of Education in Bolivia and spread to the neighbouring countries—is developing in response to the needs of the indigenous populations of the sierras of the three regions. A nuclear school consists of a central school corresponding to the hub of a community with a dozen or more small rural schools somewhere on the spokes. The director of the central school is the director of the nuclear system. He is usually supported by three supervisors: one for the basic subjects, and one each for agriculture and health. The two latter supervisors indicate the new character of these schools.

Los Nucleos Escolares have gardening, handicrafts, poultry and pig-keeping, school lunches, disease control through vaccination, water improvement, and other health, sanitation, and nutrition measures as respectable parts of the curriculum. Parents come to school and learn how to grow better crops, breed better livestock, and how to care for their children.

The increase in school attendance in one of Peru's most backward communities, over a five-year period, was in proportion twice as great as for Peru as a whole. The reason was the new type of community school.

These people have discovered that education can improve their way of life. They are willing to work for the new system. The Indians in these communities have contributed land, local materials, and labour without cost for school-house construction. Beautiful two-room schools have been constructed for as little as $275. The people pay the difference in materials and work instead of paying taxes for the whole project. They probably benefit financially and, being personally involved, also learn something about community development.

Children enjoy going to these schools. Teachers are eager to learn new methods of teaching. Workshops, institutes, and summer schools for teacher improvement must be conducted on an invitation basis, because all the teachers, supervisors, and directors want to attend.

The great challenge for Latin-American and United States educators working with these schools is to design a new curriculum —not just add functional subjects to the old one—and implement it with instructional materials and improved methods.

In Bolivia there are more than one thousand rural schools operating under the new nuclear system which that country originated. There are thousands of children in 4-H clubs. Rote learning is disappearing. One nuclear system of fifteen schools has been organized in Panama. A model primary demonstration school has been established in Paraguay. In Peru over three hundred rural schools have been improved: many of them have been constructed by local workers under the aegis of the co-operative education programme. More significant, however, is the fact that the government of Peru in 1951 accepted the plan worked out under the joint education staff for building modern elementary schools in all the provinces. The Congress appropriated 20 million *soles*[2] for the first year of construction and have committed a similar amount annually until all communities have good primary schools.

Vocational Education

The Institute of Inter-American Affairs has been more active in vocational education than in primary education. The areas of activity include industrial arts, trade and industrial, home economics, and agricultural education. These programmes have been carried on in Bolivia, Brazil, Chile, Ecuador, El Salvador, Honduras, Nicaragua, Panama, Paraguay, and Peru. The extent and scope of the programmes vary from country to country.

[2] Approximately 52 *soles* = £1 or 2·8 U.S. dollars.

For example, industrial surveys were carried out in Brazil and the results used as a basis for revision of vocational school curricula. Fifteen hundred teachers and supervisors have received in-service training in Brazil and one hundred and twenty have been given intensive training in the United States. Thirteen thousand industrial workers have received training in the São Paulo area. Bolivia has been assisted by the acquisition of modern shops, shop equipment, and laboratories. The industrial-education programme has been more carefully correlated with the needs of industry. Up to the present, IIAA asistance to vocational education in Chile has been limited to the consultative services of one technician in vocational education. In Peru, the major emphasis has been upon assisting the Ministry of Education in designing and equipping modern shops and in the production of instructional materials for all the vocational schools.

As indicated, the programmes vary, but in general have followed a logical pattern. There have been industrial surveys to determine the need for skilled and semi-skilled workers. Existing shops and curricula have been modified to meet these needs. Instructional materials have been written or translated from English into Spanish or Portuguese. In-service training programmes have improved the teaching staffs.

Agricultural education is one aspect of vocational education which for one reason or another has been neglected in most of the co-operative programmes.

Instructional Materials

Rote learning is both a cause and a result of the dearth of instructional materials in the rural schools of Latin-America. The accepted equipment of a student is a notebook in which he writes whatever the teacher dictates. There is less incentive to write and produce instructional materials than under a more functional curriculum. Inexperienced and inadequately prepared teachers have no choice except the old system. The lack of materials forces them to resort to dictation, memory work, and the use of rigid examinations as a measure of growth.

Nothing would improve primary education in Latin-America more than the production of an adequate supply of children's reading textbooks. IIAA has not placed enough emphasis upon this problem. Therefore, hundreds of rural schools have been organized and reorganized without any significant changes taking place in curriculum, instructional materials, and teaching methods.

One set of seven primary reading textbooks for use in the first and second grades was produced and tried out in Bolivia, Costa Rica, Ecuador, Guatemala, Honduras, Peru, and El Salvador. The first printing included five thousand copies of each book. They were printed in Washington, D.C., in 1948–9. These books were well

written and beautifully illustrated. They did not receive universal acceptance. Perhaps no books for primary schools should gain complete acceptance unless produced in and by the country where they are to be used. Expert advice on reading and on children's books could greatly help local educators and writers. This type of service could very well replace some others that are not so urgent.

During 1953, a well-written handbook for teachers was published under the auspices of IIAA. This handbook grew out of the joint experiences of United States technicians and their Latin-American counterparts in their new approaches to teaching and learning. The book is well written and has received great acclaim in Latin-America and in other countries where American educators are working on co-operative programmes.

Instructional materials for technical education have not posed such a difficult problem. Hundreds of pamphlets and books have been translated into Spanish, illustrations drawn and properly labelled and printed for use in all vocational schools. Their contents are less controversial. Cultural differences and national boundaries are not so sensitive to scientific and technical documents for widespread classroom use as to those in language, arts, and social studies. These cultural differences need to be respected and encouraged if the technical assistance programmes are to achieve their maximum good.

Audio-visual materials have been of great assistance in the improvement of instruction. Many items have been produced locally with good results. If completely integrated with the curriculum, visual materials make up in part for the shortages of other instructional devices.

Teacher Education

From the very beginning of the technical assistance programme in Latin-America, in-service and pre-service training of teachers has been a major objective. It is generally acknowledged that the development of good programmes in rural education for the masses must be paralleled by the expansion and improvement of normal schools (teacher training colleges).

The close relationship between the development of technical schools and the training of teachers has not been so obvious. For example, many vocational schools in Latin-America employ industrial tradesmen as teachers in the various shop courses. This has been the rule rather than the exception in most of the countries.

The long-range improvement of vocational training properly related to general education requires teachers with greater educational accomplishments than the mastery of a trade. They need a high level of general education, competence in their trade and in the related technical and professional courses.

Ten years ago there was no institution in Latin-America properly organized, equipped, and staffed for the training of vocational school teachers. Therefore, one of the problems that has confronted the Institute of Inter-American Affairs and ministries of education has been the programmes for training teachers for the vocational schools and regular elementary and secondary schools as well.

Unfortunately, the Institute of Inter-American Affairs has sponsored only one programme in general secondary education. That was in Chile during 1946–7. The purpose of the project was the reform of secondary education with emphasis upon a more functional curriculum. Dr. Erma Salis and Dr. Harold Spears were the Chilean and American co-ordinators respectively. The staff included nine Americans and their nine counterparts from secondary education in Chile. Most of the secondary schools in Chile are now following the curriculum developed through this project. Its influence is spreading to other Latin-American countries.

In all other programmes the concern has been with vocational aspects of secondary education. This has greatly complicated the problem of preparing teachers adequately for elementary, secondary, and vocational schools, because these teachers in most of the Latin-American countries must be graduates of secondary schools before they can enter the normal schools. The system followed has been the development of new curricula in the elementary and normal schools combined with traditional classical secondary education.

The co-operative programme has assisted three normal schools in Bolivia and has prepared the directors and supervisors for fifty-two nuclear schools; trained fifteen hundred teachers in vocational education in Brazil; assisted eight rural normal schools in the development of teachers' guides, curriculum materials, and new methodology in Ecuador, and trained six hundred and eighty-five primary teachers through summer sessions and workshops in Ecuador; assisted with the construction of and equipped a modern vocational school, prepared the staff for this school and organized vocational home economics in the normal schools of El Salvador; established two national normal schools (one for men and one for women) and a few model elementary schools in Honduras; constructed a new rural normal school as a pilot project in Nicaragua; participated in the rural teacher training programme in the national normal school and in fifteen elementary schools in Panama; conducted five in-service teacher training seminars for rural normal school and primary teachers in Paraguay; designed, constructed, equipped, and organized a modern teachers' college for the preparation of every type of teacher needed in Peru, and assisted in the establishment of a rural normal school in Urubamba for the training of teachers for the nuclear schools of the sierra.

A more detailed analysis of one of these teacher training projects underlines the problems involved. In 1950, the director of the

co-operative programme and the Minister of Education in Peru decided to make the establishment of the *Escuela Normal Central del Peru*, to be located thirty-eight kilometres north-east of Lima, the principal activity and responsibility of the joint staff. A few of the main problems involved in this enterprise were: selecting a suitable site for the school, deciding the types of teachers to be prepared in the institution, planning the curriculum and building programme for an institution of two thousand students (including elementary and secondary demonstration schools), selecting and preparing a staff for the institution, making salary schedules for the staff and other personnel, stating the requirements for graduation from the institution and its general relationship to other institutions of higher learning in Peru.

After several months of study on the part of the joint staff it was decided that the institution should: prepare urban and rural teachers for every region of Peru in order to establish high standards for each region; develop new curricula for preparation of urban and rural teachers; prepare trade and industrial teachers for the entire republic; prepare normal school professors and especially for the rural normal schools which serve the mountainous regions of Peru; prepare supervisors, directors, and other administrators for positions of leadership in all phases of education; develop adequate extension services for conducting workshops and institutes in various regions; serve as a reservoir of information and as a centre for the production of teaching materials and textbooks for every level of education; prepare secondary school teachers; become a fully accredited degree-granting institution by the end of five years.

After many discussions it was decided that the curriculum should include the following divisions: the division of education and psychology, including departments of elementary and secondary education with corresponding demonstration schools; departments of psychology, physical education and health, and home economics; the division of technical education, including departments in vocational education and in pure and applied science; the division of social science; the division of humanities, including, among others, departments of art, ceramics, music, dance, and religion.

The problems of admissions, guidance, records, dormitory supervision, and teacher placement were co-ordinated under a director of student personnel services.

The office of business manager was established for management of pay-roll, purchasing, employment of civil service personnel, supervision of buildings and grounds, and general financial accounting for the institution's expenditures.

The office of extension services was established for the development of close co-ordination between in-service and pre-service training of teachers, the development of workshops and summer sessions in different parts of Peru and for the development of close

co-ordination between the central normal school and other teacher training institutions.

The entire programme was greatly accelerated because the UNESCO mission provided technicians in social studies, secondary education, chemistry, and physics; developed science laboratories and provided equipment for the sciences; provided training grants to send members of the staff to Europe and the United States to supplement the support given by the Institute of Inter-American Affairs.

The curriculum committee which worked out the preliminary plans for opening the institution included two members of the UNESCO mission, one teacher training specialist from the IIAA, and two Peruvians, one of whom (the Dean of the Faculty of Education of San Marcus University) served as chairman of the committee. Thus, through the joint efforts of UNESCO, Peru, and the IIAA, the curriculum committee had the benefit of educators from three continents.

The Normal School opened in July 1953, with approximately half the building programme completed. It is operating under the Ministry of Education with the continued assistance of the IIAA and UNESCO.

Organization of the Joint Programme

A unique development that has come out of the Latin-American experience is that of joint operation of educational projects on which there has been prior agreement between ministries of education and the chiefs of the education missions for the Institute of Inter-American Affairs. This means joint funds to which Latin-American countries have usually contributed two to three times as much as IIAA. There has been a joint staff, and joint planning with respect to objectives, projects, and procedures. Decisions involving educational philosophy, curriculum, and methodology have resulted from a synthesis of the intelligence and experiences of a joint staff: working together not because they have to, but because that has proved to be the most effective way of rendering technical assistance in the field of education.

In negotiating educational agreements, the chief of IIAA's education mission is in a position that is practically co-ordinate with that of the minister of education. In serving as a joint administrator in a project, the chief of IIAA's education mission occupies a position within the Ministry of Education. He is usually designated as the Director of the Co-operative Education Programme. As such he serves in a position comparable to that of a director-general in a ministry of education. Thus, the programme is in every sense a ministry of education programme. This method of achieving democratic action under a joint staff is one of the unique achievements of the co-operative programmes in Latin-America.

RAYMOND C. GIBSON.

CHAPTER FIFTEEN

WHAT FUNDAMENTAL EDUCATION IS

THE United Nations and its specialized agencies are all concerned in related ways with the raising of the standard of life in underdeveloped countries. The role of education in this work is obviously of the first importance. On the one hand the post-war years have seen remarkable efforts in many countries to plan the extension of primary education so that within a foreseeable time it may be free and universal. On the other hand UNESCO has concerned itself also with a more immediate kind of education, which has already been practised in many countries under various names but which UNESCO calls 'fundamental education'. This is education, naturally, of adults for the most part, which aims at giving the elementary knowledge necessary for a more effective social and personal life in the environment, however poor, in which people actually live. It has been emphasized by UNESCO because ignorance is found as the concomitant and often the cause of low productivity, the disease, and the hunger which keep down so frightening a proportion of the men and women in the world.

The full definition of fundamental education, agreed between UNESCO and the United Nations and the other specialized agencies concerned, is as follows:

> Fundamental education is that kind of minimum and general education which aims to help children and adults who do not have the advantages of formal education to understand the problems of their immediate environment and their rights and duties as citizens and individuals, and to participate more effectively in the economic and social progress of their community.
>
> It is 'fundamental' in the same sense that it gives the minimum knowledge and skills which are an essential condition for attaining an adequate standard of living. It is a prerequisite to the full effectiveness of work in health, agriculture, and similar skilled services.
>
> It is general in the sense that this knowledge and these skills are not imparted for their own sake only. It uses active methods, it focuses interest on practical problems in the environment, and in this way it seeks to develop both individual and social life.
>
> It is concerned with children for whom there is no adequate system of primary schooling and with adults deprived of educational opportunities; it utilizes all suitable media for their development through individual effort and through community life.
>
> Fundamental education must awaken a consciousness of human dignity and develop a sense of the cultural and moral solidarity of mankind.

Fundamental Education and Community Development

Two explanations should be made in respect of this definition: first, the relationship between fundamental education and other work contributing to economic and social development, and secondly the relationship between fundamental education and school education.

Meetings have been held between representatives of the secretariats of the various United Nations organizations concerned to define the relationship of the different activities involved in 'community development'. It was agreed to reserve this last phrase as a generic term, to describe the totality of what was being attempted to raise the standards of living of local communities, whether its separate aspects be social-welfare work, preventive medicine, the improvement of agriculture, the development of small-scale industries, or education. It was recognized that the first decisive impact might be, for instance, through clearing a region of malaria, through the establishment of community centres, through the ending of soil erosion, or through a planned campaign of school and adult education, and that each of the United Nations bodies (like each of the appropriate national ministries and services) would have its specific skill to contribute according to the differing circumstances. There were certain specific educational skills involved, the most obvious of which (though not necessarily the first in time or the most important) was knowledge of how to read and write. And at the same time there was a general educational factor in the whole process of the improvement of community life. UNESCO is concerned with both this specific and this general educational factor, and an attempt has been made to define and distinguish between them and so to discourage a rather loose use of the term 'fundamental education' as if it meant the improvement of community life *per se*.

In the thinking of UNESCO, fundamental education has never been school education merely postponed to post-school years. In so far as it is concerned with skills that ought to be learned at school these will be developed at a time and in a way appropriate to needs felt by people themselves. Learning to read and write, for example, should be attempted only when these are felt to be necessary for the attainment of purposes that the people of a poor community have in mind themselves, for only so will they continue to be put to use. Educational methods will rarely be those of the formal classroom. And although from the point of view of a UNESCO or a national field worker the purpose of something being done may be educational, it may appear to those directly concerned to be much more obviously material. When the people of a village get together to discuss how they can improve their water-supply so that their land will be properly irrigated, the exercise may seem to be one of raising more crops; its more permanent purpose may be to encourage collec-

tive self-help, practical civic education if you like, so that when water has been brought to the land people may start to think of getting pure drinking-water and lowering the mortality-rate or using the reading and writing that has first been learned for utilitarian purposes for their country's poetry or religious books. It is in recognition of this general educational factor in interplay with more directly material ones that UNESCO, the World Health Organization, the Food and Agriculture Organization, the International Labour Organization, and the United Nations have taken the view that fundamental education must be a combined operation.

Fundamental Education and School Education

If this is the way in which fundamental education relates itself to other activities for raising the economic and social standards of life of backward communities, within the field of education itself there is another relationship which deserves emphasis. Attempts to introduce compulsory schooling, even if it is free of charge, or even attempts to raise the school-leaving age, may very well come up against a hostility on the part of parents, based on lack of appreciation of the importance of education for their children and more specifically on the desire to use their earning power for the support of the family. The sovereign remedy for this state of affairs is the development of a passion for education in the parents themselves, and that is what takes place in any sustained fundamental education campaign. Then again—to look at the problem of combating ignorance from the opposite end—unless the essentially emergency work of fundamental education is backed up by a serious attempt to provide at least primary schooling for the oncoming generations the emergency will last for ever. Adult education in some form or another there should always be, if only because education is a process that should continue till we die. But fundamental education is essentially an emergency operation which should disappear when the provision of school, college, and adult education of a more advanced kind is adequate to social needs. For these two reasons UNESCO advocates the extension of school education side by side with fundamental education. Only so will the school back up the home, and the home the school.

These two problems are linked even more closely. Where there is a school in a village the schoolmaster or schoolmistress is commonly the key person in a fundamental-education campaign. And, lest the teacher should make the mistake of applying unadapted school methods to work in fundamental education, a course of 'orientation' towards fundamental education is a most desirable thing. It is for this reason that UNESCO encourages in its member states the impregnation of training colleges, especially for rural teachers, with the idea of fundamental education.

This again is connected with the modification of the primary

school curriculum that is now exercising the minds of educationists in so many countries where such education is now planned for everybody. This had led to such experiments as that of the 'community school' in the Philippines. It lies behind much of the thinking associated with the 'basic education' inspired in India by Gandhi. It is connected with attempts to make what is taught in the village school real to the children because of its relevance to village life and more acceptable to the parents for the same reason. There are dangers here: there is the danger of relying too much for school finance on the sale of things made in school for economic rather than educational reasons, and there is the danger of being content with utilitarian programmes of short duration which do not give to children the minimum that a school should give. Nevertheless, the concept is right. The interplay between the fundamental educationist and the school teacher can be very fruitful indeed.

The UNESCO Programme

With these general considerations in mind something more detailed may be said of the actual programme of UNESCO in fundamental education. It rests upon three bases: regional and national training centres for fundamental education, the system of projects or enterprises in fundamental education associated with UNESCO, and the expanded programme of technical assistance to member states. In all of these the action is a joint one between UNESCO and its member states, and indeed the latter bear the main part of the burden. The action of UNESCO centrally or by direct action in the field is one of stimulation, of advice, and of demonstration: one might almost say it is catalytic.

International and National Training Centres

The establishment of training centres in fundamental education is based on the recognition of the urgent need, first, for teachers and leaders trained in a co-operative approach to community education, and secondly for educational material for teaching literacy and for basic instruction—the essential tools of the education team.

By appropriate agreements with member states, with the co-operation of the other specialized agencies of the UN, and in part through technical assistance funds, UNESCO has established two international training centres for the training of teachers and workers and the production of materials for fundamental education. The first centre was opened at Patzcuaro, Mexico, in April 1951, and enrolled students from nine Latin-American countries (Bolivia, Costa Rica, Ecuador, El Salvador, Honduras, Peru, Guatemala, Haiti, and Mexico). Since its establishment forty-six students have graduated. They constitute in each of their own countries a nucleus of trained personnel competent to plan and implement an effective programme for fundamental education. By 1953, the third year of operation,

the Patzcuaro Centre had enrolled students from eighteen of the Latin-American states.

In January 1953 the second international centre was inaugurated at Sirs-el-Layyan, Egypt. This centre for the Arab states serves students drawn from Egypt, Hashemite Jordan, Iraq, Lebanon, Saudi Arabia, Syria, and the Palestinian refugees.

The objectives of these centres may be briefly defined as follows:

To provide training for leaders of fundamental education.

To prepare model fundamental education materials, specially adapted to the needs, resources, and cultural levels of local communities.

To give special training to students in the techniques of preparing and using these materials.

To provide technical information, based on research developed in the centres, to field workers engaged in fundamental education or employed in preparing educational material in the member states concerned, with a view to promoting fundamental education in those countries.

The centres are organized in three main divisions, which of course work closely together under the Director:

(*a*) The Research Division (including a clearing house and a research library).

(*b*) The Production Division.

(*c*) The Training Division.

Students are trained through active experiences to bring about improvements in adjacent ' laboratory ' communities.

National Centres

The Latin-American countries, as well as the Arab states, by virtue of their relative linguistic and cultural homogeneity, constitute convenient regions for the operation of these training centres. Such homogeneity, however, is difficult to obtain in other areas of the world. The establishment of national centres therefore is increasingly favoured. This does not preclude the development of national centres into regional centres by agreement with the neighbouring member states.

In March 1953, the government of Thailand began the construction of a national training centre in fundamental education at Ubol, in the north-eastern part of the country. The Centre, whose purpose is the same as that of the regional training centres, accepted its first students in 1954, drawn from all the provinces of Thailand. UNESCO's Department of Technical Assistance and the other UN agencies are contributing towards the establishment of the centre by making available the services of international specialists to serve on the staff. The establishment of other national centres, e.g. in Ceylon, Liberia, and Iraq, is under way.

Associated Projects System

At its third session the general conference instructed the Director-General to establish " a system of Associated Projects and Agencies, by which important activities in fundamental education in various parts of the world are linked up through the Education Clearing House."

The intention of this directive was to draw into association significant projects in fundamental education in the member states and, through the service that UNESCO would render them within the competence of its programme and budget, to help them to develop and improve the methods and techniques by which UNESCO's objective may be effectively realized.

UNESCO services these associated projects by:

(1) Providing such technical information as may be available in the form of regular publications—bulletins, abstracts, and bibliographies, monographs and studies—and similar source materials.

(2) Answering inquiries on specific matters within its competence.

(3) Making available technical or other reports from the projects or examples of materials produced by them.

Further, within the limits of the budget authorized for the operation of the system, UNESCO sends on requests from associated projects, specialists " to act as consultants to help the national or local authorities in developing their programme. . . ."

An example of the kind of assistance given to associated projects is provided by the training seminars organized by UNESCO in Delhi and Mysore respectively to train field workers in the fundamental-education projects in India in the techniques of low-cost production of suitable visual-aid materials for use in their educational work. Again—to take another example—in the spring of 1953 a field consultant was sent to assist the Department of Social Welfare in Accra (Gold Coast), to train local editors in the production of materials for new literates.

There are to date fifty-one such associated projects in fundamental education drawn from seventeen member states.

Technical Assistance

The Service of Technical Assistance was established on the recommendation of the Economic and Social Council and by resolutions adopted by the General Assembly of the UN in 1949.

The object of technical assistance is to give direct aid to governments, at their request, in carrying out programmes for national development. The Technical Assistance Board co-ordinates the technical-assistance activities in the specialized agencies of the UN. In each of these agencies technical assistance operates within the framework of the programmes of the particular agency. UNESCO's Department of Technical Assistance, therefore, assists member

states, at their request, in carrying out educational programmes aimed at facilitating the economic and social development of the states concerned.

An example of the kind of assistance rendered by the Department of Technical Assistance to a member state is the fundamental-education team sent to work in the land-reclamation project in Dujailah, Iraq, an experiment in agrarian reform for which education is proving indispensable.

Conclusion

In these three main ways, then, UNESCO has attempted to encourage and to give international coherence to a kind of education specifically related to the improvement of standards of life in backward communities. It has been able to do so, with a measure of success in spite of its limited means, precisely because it is an international governmental agency. It has no power in any formal sense. It can assist its member states only when they ask for assistance, and what it is asked to do therefore fits in with national development plans. But to this development it can bring international experience, the experience not of one other country but of many. What has so far been done is very small in relation to the need. If thinking has been clarified a little, practice improved a little, and some impetus given, nevertheless the chief result has been to show how immense and how good an educational work could be done if resources, national and international, matched the need.

LIONEL ELVIN.

CHAPTER SIXTEEN

INTERNATIONAL STATISTICAL INSTITUTE: STATISTICAL EDUCATION PROGRAMME

Background of the Programme

THE experience of international organizations, governments, and non-governmental agencies since the last war has shown an increasing need for well-educated and trained statisticians, particularly in the economically less-developed areas of the world. The Secretary-General of the United Nations, in a report to the Statistical Commission in 1949, summarized this need as follows:

> The Statistical Commission recognized that there is a shortage of adequately educated and trained statisticians in many countries, and the Secretariat has had the opinion confirmed by expert testimony. . There was unanimous concurrence in the view . that the burden of statistical work in public and private institutions is large, will increase, and will have to be met by the education and training of more and better statisticians.

As a result the Statistical Commission and the Economic and Social Council of the United Nations requested UNESCO and the International Statistical Institute to "take appropriate steps to further the improvement on an international scale of education in statistics ".

The activities of the Institute's programme can be grouped under three broad headings:

(1) The operation of International Statistical Education Centres in Calcutta and Beirut.

(2) An advisory service for students of statistics who desire, and are qualified for, education abroad; and for educational institutions with a view to the inclusion, or strengthening of, education in statistical methodology and application in their curricula. This service extends at present principally to countries of the Middle and Far East.

(3) The preparation and publication of various teaching aids, such as a dictionary of statistical terms; lists of textbooks on statistics;

special bibliographies on selected parts of statistical theory and application.

The International Statistical Education Centre, Calcutta

The first major venture established under the programme was the ISEC, Calcutta. This was set up in October 1950, since when it has been operated jointly with the Indian Statistical Institute. Until the end of 1952 it was partially financed by UNESCO; by then it had become an established institution and the government of India agreed to take over its financial sponsorship. The government now makes a grant to the Indian Statistical Institute to cover local expenses, and to the International Statistical Institute to finance visits by statisticians and teachers from abroad, who share the teaching with staff members of the Indian Statistical Institute.

The International Statistical Institute is also responsible for recruiting students for the centre. During the first two and a half years of the centre's operation (five six-month terms), 125 students [1] from fifteen countries were given training.

Most of the students had their travel and living costs covered by their governments, but a large number of them came on fellowships awarded by the government of India under the Colombo Plan. As can be seen from the table, most of the countries of the Far East and some of the Middle East have availed themselves of the services of the centre, and there is no sign that the demand is falling off. Furthermore, it is clear that the training at the centre is enabling students to go back to their jobs better equipped to help, directly or indirectly, in the economic and social development of their countries.

The International Statistical Education Centre, Beirut

It became evident quite early that the Calcutta centre would not —largely because of costs and distances—effectively serve the needs of the Middle East: yet a centre was urgently needed, since the training facilities were insufficient to meet the real demand.

The institute accordingly decided to establish a second centre in Beirut as part of its UNESCO-sponsored programme, and the first term opened in February 1953. Invitations to governments in the Middle East to nominate students had gone out some time previously and had met with an immediate and widespread response. As a result, forty students from seven countries attended the first (five-month) term. Their distribution by countries and according to the two language sections of the centre was:

[1] Afghanistan 1, Burma 15, Cambodia 1, Ceylon 4, India 34, Indonesia 3, Iraq 1, Japan 3, Malaya 1, Nepal 3, Pakistan 36, Philippines 11, Syria 1, Thailand 9, Vietnam 2.

English Section		*French Section*	
Egypt	1	The Lebanon	22
Iran	1	Turkey	3
Jordan	5		
Libya	3		
Sudan	2		
Turkey	3		
	15		25

Most of the students were nominated and financed by their governments. The participant from Iran came on an International Labour Organization fellowship, two of those from Jordan under U.S. Technical Co-operation Service auspices, two others from Jordan on United Nations Relief and Work Agency (UNRWA) fellowships. The international character of the centre has been ensured, not only by the distribution of the students, but also by the organization and teaching staff of the centre. The teaching has been shared between local teachers, visiting statisticians and teachers of statistics from abroad. As in the Calcutta centre, much emphasis is placed in the teaching on practical work, in the sense of both laboratory practice and field surveys.

It is evident that there is a widespread demand for the services of the Beirut centre, and the Institute hopes that the centre will prove to be a continuing aid to governments and other institutions in the region.

Other Activities

Although the Calcutta and Beirut centres are perhaps the major activities under the institute's programme, they are not the only ones. Another important part, already mentioned, is the preparation and publication of teaching aids. One of the first efforts under this head was the publication of a bibliography of one hundred selected textbooks on statistical methods and applications. The bibliography contained publication details and chapter heads for each book, as well as review extracts. It was freely circulated to a large number of statisticians and institutions in the Far and Middle East, and has been widely welcomed. This bibliography was confined to English books. A similar one on French books has now appeared, and is being followed by others.

The main project on teaching aids at present is a dictionary of statistical terms which will give definitions in English (and translations of the terms in several languages) of some two thousand terms. Various special bibliographies are also in preparation.

Under the programme's advisory service, mentioned above, many students and officials from the Far and Middle East have been advised on study facilities and financial opportunities. Unfortunately, the institute itself cannot offer financial help to these

applicants, since its resources are too limited. However, one of the few international fellowships ear-marked for statistics is that offered under the institute's programme to the best graduate every year of the Calcutta centre.

Finally, two other activities may be mentioned. One is the occasional organization of local short courses in statistics, such as one in Mysore in May 1952, which was attended by thirty Mysore state statistical officers. The other is the organization, after each of the institute's biennial sessions, of an international statistical seminar. The first two seminars were held in Geneva/Berne in 1949, and in Calcutta in 1951; the third in Rome in September 1953.

These, then, are the main activities carried out by the International Statistical Institute. It is believed that, in their varying ways, they help towards the end of furthering "the improvement on an international scale of education in statistics."

PH. J. IDENBURG.

CHAPTER SEVENTEEN

THE CULTURAL DEPARTMENT OF THE PAN-AMERICAN UNION

THE Department of Culture of the Pan-American Union came into being in 1948 as a result of the Charter of Bogota, drawn up on the occasion of the ninth Inter-American Conference, which gave new strength to the alliance of the Americas by the creation of the Organization of American States.

The work of cultural inter-change began in the realm of music and only slowly extended to other spheres. However, with the creation of a self-contained department within the P.A.U. and the inclusion there of the Columbus Memorial Library, founded in 1909, and containing over 170,000 volumes exclusively devoted to New World subjects, the task of establishing closer inter-American cultural relations took on a completely new meaning. Following the example of UNESCO, it covered three aspects: education, science, and culture.

Education

Under education an administration was set up to solve the various problems concerned with the following specialized sections: fundamental education, secondary education, technical and vocational education, and the exchange-of-persons programme included in the plan of university education. Under the general direction of one of the greatest educators of the continent, Dr. Guillermo Nannetti, small but highly able staffs (as I can personally testify) have carried out their allotted tasks. Special emphasis was given to fundamental education, for it was considered that the fight against illiteracy was the number one problem of Latin-America. The other sections, however, did not lessen their efforts in their own particular fields.

The greatest practical result to date, in the technical and secondary education branches, has been the establishment of meetings (called the inter-American Seminars) of specialized educationists. These meetings have taken place in various Latin-American countries, are prepared well beforehand, and are preceded by the sending out of questionnaires to all the members of the O.A.S. By means of these it is possible to arrive at an evaluation of the true educational picture in each special field. Once the information supplied by the questionnaires (to which the governments and private institutions have given their active support) is collated, the date of the next

seminar is announced. Lasting from four to five weeks and attended by official delegations composed of specialized educators, the work of the seminar is of a severely practical nature and the educational situation and possible methods of improvement in each territory are discussed. The findings and recommendations of the seminars are subsequently published, whereupon each member state decides whether or not to adopt the resolutions in its active educational policy, as far as is permitted by its legislation and resources.

The fight against illiteracy has already resulted, with the co-operation of UNESCO and technical assistance programmes, in the foundation, at Patzcuaro in Mexico, of a centre for the training of rural primary teachers known as CREFAL. Venezuela has been chosen as the site for the first inter-American training college (*escuela normal*). At the same time a department has been opened in Washington for the preparation of material to be used in the campaign against illiteracy. Already this department has produced a new type of reading textbook for use in all the American countries, especially in the education or re-education of adults. The reading textbooks are prepared according to the most up-to-date pedogogical methods and are based on the everyday problems of the inhabitants connected with, for example, the supply of milk or water, with disease, agriculture, and so on. Suitably trained teachers should be able with this material to initiate simultaneously campaigns for the systematic raising of the intellectual level in all the Latin-American countries. This campaign is parallel to that organized by the Social Department of the P.A.U. under the guidance of the Social and Economic Council, which also is intended to raise the economic level of the people.

Under the same heading particular attention should be directed to the work being done in the field of technical and vocational education (still rather lacking in Latin-America). More than one seminar has been devoted to this aspect, and the last of these at the University of Maryland received the support of every American State. For more than a month the problems, and their possible solution, were studied and discussed.

Another aspect of the Department of Education is the exchange of persons. The P.A.U. does not itself possess funds for these programmes but by other means encourages the interchange between the U.S.A. and Latin-America of students, teachers, workers, industrialists, and merchants. It is felt that this is a rich source of cultural contact.

Science

The science section, including both the social and the natural sciences, has not yet reached the stage of development of the education section of the Department of Culture. This is understandable, however, when it is realized that the latter section receives more than

half the budget grant of $400,000.[1] Added to which is a special sum towards the maintenance of CREFAL, in accordance with the agreement with UNESCO.

The social science section publishes a monthly bulletin in which problems of inter-American sociology are discussed, books on the subject reviewed, and studies prepared, such as the one on the middle classes of Latin-America which has run to several volumes.

The parallel section of natural science also possesses its own publication in which announcements to the Latin-American Press are made regarding scientific subjects, notices given of meetings of seminars, congresses, scientific associations, and replies given to correspondents on scientific subjects.

Culture

The primary work of the division of arts and letters section of the Department of Culture is that of publication and translation. Two periodicals are published: *R.I.B.* is devoted to bibliography, while the second, *Panorama*, is a cultural magazine printed in four languages in which articles from the leading newspapers and periodicals of the continent are reproduced.

The section also publishes series of books on American authors which generally contain small anthologies. A programme of translations has been started, though it is as yet in its infancy, as well as the preparation of a biographical bibliography. Recently the section accomplished the laborious task of collating more than three thousand resolutions on cultural matters agreed upon between the American States since 1890, as a preparation to the Cultural Charter of America decided upon at the first meeting of the Council for inter-American Culture in Mexico in 1952.

A further section is devoted to the auditory and visual arts, and its work consists of the publication of a monthly bulletin, the organization of concerts, the publication of guides to museums and collections, the dissemination of the music of each country, and similar activities.

Mention should also be made of the organization of courses at the headquarters of the P.A.U.; of the promotion of study seminars for Latin-American problems at local universities or, as in 1952, at Columbia University, New York, when seventy-five universities of the North Atlantic took part.

During these two years the director of the Department has travelled widely in the U.S.A., Mexico, and Canada, taking courses and giving lectures at universities where single chairs or entire departments are dedicated to the study of Latin-American affairs. More than eight hundred universities or university colleges possess faculties in these studies, and as there is nothing more beneficial

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[1] Approximately 20 *cruzeiros* = U.S. $1 = 8*s*.

than personal contact, it is proposed to establish similar courses in the local universities of the Latin-American countries themselves.

Conclusion

Thus in a few brief lines the activities of the Cultural Department of the P.A.U. are described. To discuss the work of each section in full detail is not possible here. It is enough to say that the publication of documents referring to educational, cultural, and scientific agreements between the Americas since 1890 for the purposes of the Cultural Charter of America alone has run to eight volumes.

The Department to-day is well established. A staff of over fifty, a budget of around $400,000, the publication of weekly and monthly periodicals, and of books, and the organization of congresses, seminars, and so on, succeed in making it, under the direction of the great Brazilian writer Erico Verissimo, one of the most effective instruments for promoting friendly relations between the Americas and for contributing towards the peace of the whole world.

ALCEU AMOROSO LIMA.

SECTION VI

THE IMPACT OF WESTERN CULTURE

HERE the impact of the West through technical assistance is critically examined and the social evaluation of the results considered. In taking stock, Mr. Blelloch briefly reviews the main agencies hitherto responsible for the deliberate export of technical knowledge. He warns against the too-ready acceptance of success stories to the neglect of the lessons which might be learned from failures, and stresses the desirability of making more widely known "the dislocation that the abrupt introduction of new technological processes and activities, without adequate planning or preliminary surveys, is likely to produce ". Finally, he suggests a number of practical conclusions based on his own analysis and on the previous contributions to this YEAR BOOK. To his task Mr. Blelloch brings a lifetime's work and experience in the International Labour Office. Formerly chief of the Non-Metropolitan Territories Division of the Office, he has carried out many technical assistance missions both for it and, more recently, for the United Nations. These missions have given him opportunities of observing at first hand the operation of programmes throughout the world. In the second article in this section Professor Green, Professor of Education in the University of Ceylon, claims that " evaluation is an urgent need to-day in relation to the search for social progress ". Using his intimate knowledge of conditions in Ceylon, he describes situations where evaluation could be applied, and gives the results of some studies there.

THE EDITORS.

CHAPTER ONE

EXPORT OF TECHNOLOGY AND THE CLASH OF CULTURES

TECHNOLOGY has, of course, always tended to be transmitted from one community to another. It can hardly be imagined that the techniques possessed by even the most isolated communities were invented by their tribal forefathers in a vacuum. The mere contact of nations and cultures suffices to set in motion a kind of natural spontaneous seeping of techniques, and through the ages this seeping process in the technical field has inevitably brought about marked cultural changes. The English landscape, for instance, owes its present form, or forms, to a whole series of continental influences. The crops we grow and eat and the flowers that beautify our gardens result from past export of technology; and who can say what influence the changes in our landscape, agriculture, and horticulture have exerted on our ways of life and thought? Who can say, for that matter, what modifications and adaptations the pre-existing ways of life and thought of our ancestors have imposed on the form and utilization of the techniques that they borrowed and we have inherited?

This spontaneous seeping of technology may be assumed to proceed, as it were, down given inclines—to follow lines of least resistance—to be most effective where circumstances are most appropriate. Thus, Roman methods of building and town planning have tended in the first place to influence most profoundly peoples who were closest to Rome and whose geographical and climatic conditions most resembled those of the Romans. The Iberian colonizers in their turn have taken the Roman techniques to the New World, in the same way as the Nordic colonizers, influenced definitely but less directly by these techniques, have taken with them their own version of house and town. Here again, who can say what influence such differences in house and town planning have exerted on the cultures of the new communities that have grown up on the other side of the Atlantic? [1] Who can disentangle cause from effect in

[1] And not only in the New World. In Asia, too, " the new cities, which grew up as a result of European contacts . . . represent a new principle. . . . The organization of the Municipal Committee of Shanghai by the British merchants, and its phenomenal growth during a period of seventy years, may represent a greater and more far-reaching change than the control exercised by the foreigners on the imperial court. These cities, with others developed on their model, now constitute a major feature of Asian life. Christopher Dawson, in speaking of Rome's influence on Western Europe,

the interaction between the ways of building a house or a town and ways of life and thought?

Agents of Deliberate Transference

This age-old spontaneous interchange of techniques has proceeded on the whole gradually and painlessly, and the consequent modifications of cultures have taken place in most cases almost imperceptibly. In the modern world, however, the spread of technical knowledge has been artificially stimulated in various ways. This conscious effort to export technology has involved dangers and disturbances of which we are only beginning to be aware, and which we are still far from fully understanding.

Imperialism has been a leading agent in the export of technology. Western European imperialism has carried to its colonies and dependencies a single set of skills but a certain variety of cultures. The kind of culture which the Iberian colonizers took with them was very different from that of their English counterparts, and this difference—which it would be superfluous to attempt to define in the present context—has had important effects on the ways in which technology has been transmitted, received, and adapted. Thus, the Portuguese colony of Brazil has gradually evolved, and indeed is still evolving, into a multi-racial community, superficially very different from any Western European community yet fundamentally very close indeed to the old Romano-European culture. The United States of America, on the other hand, has evolved much less gradually. The technology which it took from Europe it has developed with amazing rapidity and efficiency. But it is not a multiracial community in the same sense as Brazil (though there are now signs of tendencies in that direction). Its superficial resemblance to the north-west of Europe from which it originated are striking; but the very rapidity of its technological development, relatively unhampered by cultural traditions or prejudices, appears to be producing a kind of culture and civilization very different from any to be found in Europe. This rapid cultural evolution has been made possible by the fact that essentially different cultures—those of the American aborigines and the imported Africans—have been either suppressed or relegated to a status of inferiority, rather than absorbed and adapted.

Business enterprise has been another agent of technological export. Where the receiving communities have been of predominantly

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observes: 'It was Rome's chief mission to introduce the city into Continental Europe, and with the city came the idea of citizenship and the civic tradition, which has been the greatest creation of Mediterranean culture.' A similar process has taken place all over Asia, and may well remain Europe's chief monument in the East" (K. M. Panikkar, *Asia and Western Dominance* (London: George Allen & Unwin, 1953), p. 501). This point is highly relevant, incidentally, to the controversy as to how far, and at what rate, under-developed communities should be industrialized.

European stock and culture, technological development resulting from business enterprise has been of the same varied and integrated nature as in Western Europe itself, and this technological development has gone hand in hand with an harmonious cultural evolution. On the other hand, where the dominant ethnological elements in the receiving community originally possessed no technological culture analogous to or identical with that of Western Europe, European business enterprise—and, more recently, North American business enterprise—has tended to assume the form of economic colonialism. The industries created have been complementary to the economy of the country in which the business undertaking in question has its headquarters. They have been extractive industries, intended to supply the factories and the factory workers of the home country with various kinds of raw materials, or transport undertakings whose main purpose has been to facilitate the export of such raw materials. Such extractive undertakings have not produced, or tried to produce, either a balanced economy or an harmonious social and political community in the land in which they operate. Their activities have tended to create an uneducated, uprooted, and deculturalized proletariat side by side with a small class of rich but technologically backward landowners, lawyers, middle-men, and politicians. It would be superfluous to quote specific illustrations of the resulting unrest and disequilibrium.

A third agency of technological transference has been the *religious missions*. In the Spanish colonial empire the Jesuits and other religious groups and individuals played an outstanding part in this field. The missions in Paraguay and in the Chaco area managed to combine technical and religious teaching in such a way as to produce new civilized communities of what must have been an admirable type. The Jesuit missions in this area have long since disappeared and much of their work has been washed away; yet there are still—in the Chiquitos region of Eastern Bolivia, for instance—communities living a peaceful, harmonious, and happy life on the lines laid down for their ancestors by Jesuit teachers. Again, the results of Don Vasco de Quiroga's successful efforts to create communities each devoted to a particular handicraft are still visible in modern Mexico. In more recent times the community of Watajata on the shore of Lake Titicaca has attracted much attention in circles concerned with the integration of the inhabitants of the Andean highlands in the national life of their respective republics. Watajata, which started in 1913 as a Methodist mission and was subsequently taken over by Canadian Baptists, has, at the cost of immense effort and self-sacrifice on the part of the missionaries, brought into being a progressive, literate, happy, and self-confident community of Aymara 'Indians' whose influence is radiating for scores of miles around. The religious mission, in its efforts to import new technologies, possesses an immense advantage in that it is at the same

time, and by means worked out through centuries of experience, inculcating a new culture which is in harmony with the new technology, and which at the same time is presented and imparted in such a way as not to involve too violent a social and cultural upheaval. But the activities of the religious missions can at best be only sporadic, and there are serious dangers inherent in the vast cultural differences which divide the groups active in the mission-field. In the long run, how are the Baptist Aymaras of Watajata going to fit into the national life of a predominantly Catholic country? The Catholic Church in the Latin-American republics is acutely aware of the dangers represented by the Protestant evangelization of minority groups, and is offering strenuous resistance to the activities of Protestant missions, however praiseworthy the aims of these missions may be.

Lastly, mention may be made of the activities of various *philanthropic foundations*, the most noteworthy of which are those associated with the name of Rockefeller. Those of the Rockefeller Foundation in the field of public health are well known and have been essentially successful. The Foundation has genuinely succeeded in spreading a knowledge of modern health techniques among communities sorely in need of them, with most impressive results. Experience seems to show that these techniques, corresponding as they do to so urgent and obvious a need, are relatively easy to import, and, in view of the appeal that disease and high rates of mortality make to the conscience and imagination of charitable souls in the technically advanced countries, it is not surprising that priority should have been given to public health work. Yet everybody is now beginning to realize the dangers that may be involved in reducing morbidity and mortality unless at the same time means can be found of providing food for the stomachs and productive work for the hands of those whose lives have been saved. It is in this connexion that the activities of the bodies founded by Mr. Nelson Rockefeller (AIA [2] and the International Basic Economy Corporation) are particularly interesting. IBEC aims at introducing new techniques, particularly in the production, processing, and marketing of foodstuffs on a commercially profitable basis, and a great deal is to be learnt from both its successes and its failures. (For instance, it succeeded in creating a fishing industry in Venezuela, only to discover that nobody in the country wanted to eat fish.) It is a pity that a detailed record of its activities is not available for study by the large number of ' technical assistants ' now at work in the various under-developed countries.

Towards a Welfare World

However, modern communications, production techniques, and consumption habits have now reached a point where the export of

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[2] See pages 549–560.

technology can no longer be left to the mercy of the fluctuations of the commodity markets and the sporadic efforts of business, charitable, and religious organizations. The modern industrial state tends more and more to see its only hope of survival, let alone expansion, in the planned and organic development of its overseas markets and sources of supply. It cannot be sure of a constant flow of raw materials from areas whose inhabitants are untrained, uneducated, and violently discontented. It cannot be sure of markets for its products in poverty-stricken communities with a sub-human standard of living. The modern industrial society would be inconceivable if the masses of its peoples were illiterate and bereft of purchasing power. The concept of the 'welfare state' leads directly and inevitably to the concept of the 'welfare world'. There is thus an historical logic in the emergence of such projects as Point Four, the Colombo Plan, Colonial Development and Welfare, and the Russian efforts to develop the Far Eastern territories of the U.S.S.R. (would that more information were available about these last-named efforts and their results!).[3]

Cultural Digestion and Indigestion

The formulation of such projects has been followed by the initiation of various schemes for spreading 'technical assistance' on a large and ambitious scale. Something, though (in relation to the needs) considerably less, has also been done to implement another item in the Point Four programme: to "foster capital investment in areas undergoing development". The publication of the present YEAR BOOK is particularly timely inasmuch as it represents a kind of stocktaking of the results already achieved, and a record of the difficulties and obstacles that are becoming more and more apparent to those concerned with the organization of 'technical assistance'. The policies laid down in such declarations as the Point Four programme appeal with great force to the popular imagination in developed and under-developed countries alike. The various bodies responsible for spreading technical assistance can hardly be blamed if they have tried, in a perfectly legitimate way, to exploit this appeal. The public has been made aware by a number of attractively presented publications and films of the work that is going forward. It has been presented with pictures rather similar to the 'before and after' photographs that are a feature of patent medicine advertisements. It has been shown sick people scratching out a precarious existence by the use of obsolete techniques, side by side with happy, healthy people reaping rich harvests with modern tools and machines. It knows little or nothing of the many failures that have occurred; of the transitory nature of many of the apparent

[3] For discussion of these see: *Point Four,* Paul Duncan, p. 263; *Colombo Plan,* P. W. E. Curtin, p. 255, *Colonial Development and Welfare,* Brian Holmes, p. 374.

successes; of the very mixed, and often highly inappropriate, motives which prompt requests for technical assistance; or of the improvised nature of many technical assistance projects, and the incompetence of many of those who have had to be hastily recruited to supply technical advice. Above all, it knows little or nothing of the dislocation that the abrupt introduction of new technological processes and activities, without adequate planning or preliminary surveys, is likely to produce. In the preceding pages of the YEAR BOOK various instances of such dislocation have been quoted and its causes have been analysed and discussed. It is highly desirable that at least all those directly concerned in 'technical assistance' should study these discussions and take them to heart.

It is difficult, of course, to formulate any general doctrines about the clash of cultures that the export of technology may involve, or the means that should be adopted to reduce its ill effects to a minimum. So far as recent experience goes, it seems safe to say that where, as in many Asian countries, the culture of a receiving community is already stable, diversified, and self-confident—where it is already highly developed in an economic, technical, and political sense—the community can receive and assimilate massive injections of foreign technology without too violent cultural disturbance.[4] Japan is a case in point; though even the case of Japan warns us that the grafting of new techniques on old cultures may involve very serious dangers. It is not an accident that in the older industrial communities industrialization has proceeded *pari passu* with gradual political democratization. An authoritarian culture such as that of Japan or Imperial Germany can, as we now know to our cost, easily assimilate techniques borrowed from industrial predecessors; but an authoritarian political system blends ill with industrialization, and the mixture is apt to be highly explosive.

Japan may be taken as typical of a community with a highly developed non-industrial culture of its own, deliberately and intelligently setting out to take over and assimilate the technology of the Occident. Another striking case, of a very different character, is that of the inhabitants of the former Inca Empire. Unlike the

[4] "The changes that have been brought about in Asian life by the contact with Europe are radical and far-reaching, and will not disappear with the rise of a new Asian sentiment. The principles of government that Asia has accepted from the West constitute a major and qualitative change whose influence will penetrate far into the future. The new social structure has to be reflected in new political institutions. Further, the commercial economy resulting in the participation in world trade; industrialization, bringing with it both the power of accumulated wealth and of organized labour; the growth of organized city life, different from that of the great capital towns of the past; all these, and numerous other factors, render a reversion to the old political structures, based as they were on a rural economy and on land tax, altogether out of the question" (K. M. Panikkar, *Asia and Western Dominance*, pp. 496–7, 500).

Japanese, they were conquered by Europeans and forced to adapt their previous civilization to that of their conquerors. However, favoured by geographical circumstances, they were able to check the process and retire to the relative isolation of their village communities on the Andean plateau. Here they have succeeded in maintaining a civilization which is strongly influenced by that of their conquerors yet is very different from it; and they have until now stubbornly and successfully resisted all attempts to 'modernize' them and integrate them in their respective national communities.

The position is very different where the aboriginal culture lacks the strength and confidence to resist or adapt the invading technology. It may be worth while to give a few details of one such case. The Yir Yoront were a small and virile tribe in tropical North Australia. From the seventeenth century onwards they had occasional contacts with the European invaders—contacts ending in bloodshed and withdrawal. Their technology was of the simplest kind, being based on the use of a stone axe. There was no stone in their territory, the nearest suitable quarries being situated some 400 miles to the south. The axe heads were obtained through a complicated and ritualized system of barter by male members of the tribe who, having obtained the axe heads, fashioned the handles and fitted the axe heads to them. The axes were always retained by their male owners, though they were mainly used by the women, the axe possessed by a man being placed at the disposal of the women of his own family. The axe played a dominant part in the tribe's totemic beliefs and ceremonies. "The axe stood for an important theme that ran all through Yir Yoront culture: the superiority and rightful dominance of the male, and the greater value of his concerns and of all things associated with him." In 1915 an Anglican mission-station was established on the fringe of Yir Yoront territory. Perceiving the importance of the axe to the economic life of the tribe, the missionaries took special care to maintain ample stocks of steel axes, which they made available both to such males as they considered deserving and to women. The results were most significant. On the one hand, the introduction of the steel axe—so vastly more efficient a tool than the old stone axe—brought about no technical progress; it was merely used in the same manner and for the same purposes as the stone axe. On the other hand, the cultural effects of the missionaries' generosity were overwhelming. The qualities required in the case of a man for obtaining a steel axe from the missionaries—qualities of being co-operative, subservient, a 'good' native—were quite different from those that had been required for the adventurous business of obtaining a stone axe head by barter from distant tribes. Moreover, the steel axes were given to women as well as to men, so that the essential element in male self-confidence—possession of an axe—disappeared. Authority in the tribe

had previously been associated with family seniority and sex. The missionaries would entrust a steel axe to the 'leader' of a gang, who thus became invested with a kind of authority previously unknown. "The most disturbing effects of the steel axe, operating in conjunction with the other elements also being introduced from the white man's several sub-cultures, developed in the realm of traditional ideas, sentiments, and values. These were undermined at a rapidly mounting rate, without new conceptions being defined to replace them. The result was a mental and moral void which foreshadowed the collapse and destruction of all Yir Yoront culture, if not, indeed, the extinction of the biological group itself." We are told that "in such a situation the missionary with understanding of the processes going on about him would find his opportunity to introduce religion and to help create the constitution of a new cultural universe".[5] We are not told whether missionaries with the kind of understanding postulated were in fact forthcoming—and can only hope they were.

The interaction of old traditions and new techniques could hardly be summarized more clearly or pointedly than it has been by Professor Daryll Forde in the following passage:

> As we know from the history of ideas in the West, the reformulation of myth and code and the modification of social sentiments are slow processes as compared with the readjustment of particular items of technical activity or the mere acceptance of some new social relation. Hence the multifarious conflicts that arise between ideology and technical opportunity during phases of rapid cultural change. Even in such phases, while new techniques are adopted for reasons of individual or sectional self-interest, and new social relations are accepted as the distribution of economic power changes, traditional myths and codes may continue to claim allegiance. These may indeed appear, from one point of view—and one especially apparent to the outsider—to block obvious and important opportunities for general economic advance or social reorganization; but, from another, they can often be seen as preserving patterns of activity and social relations which are felt by the people to be of intrinsic and overriding value, and so may in fact be indispensable to the preservation of their social cohesion and solidarity.
>
> Such conflicts of values, both between peoples and between sections and individuals within a single society, are only too familiar from the history of the Western world. It is, however, little appreciated that they have been and continue to be endemic in an acute form among the multitudes of small societies as these have been brought increasingly within the orbit of an industrialized Western civilization. Moreover, even when the nature of the conflict has been sensed, the problems of providing scope and time for adjustment have been made more difficult by virtual ignorance of the nature and the foundations of the traditional value systems that were being undermined by the introduction of new techniques of administration, production, and commerce.[6]

[5] *Human Problems in Technological Change*, ed. by Edward H. Spicer (New York: Russell Sage Foundation, 1952), pp. 69–92.

[6] In *African Worlds*, published for the International African Institute by the Oxford University Press, 1954, p. viii.

Taking Stock

The facts and considerations outlined in the foregoing part of the present article and in other contributions to the YEAR BOOK suggest a certain number of practical conclusions:

Study of the Technique of Technical Assistance. Under the existing programmes technical assistance has often—perhaps usually—been supplied in a very haphazard manner, and its results have, in many cases, been correspondingly disappointing. There is a natural tendency for the organizations responsible for supplying technical assistance, anxious to use their funds and their staff and to justify their continued existence, to press technical assistance on the authorities of under-developed countries without taking pains to study the genuine needs of the receiving countries and their possibilities of absorbing and utilizing the new techniques. Conversely, the authorities in these countries often tend to apply for technical assistance for reasons which have little connexion with the countries' circumstances. The official or politician who negotiates the dispatch of a technical assistance mission is often himself a highly 'Europeanized' individual, as ignorant of the capacities and aspirations of the masses of his fellow countrymen as any 'man in the street' in Europe or North America. Bringing a technical assistance mission to his country may spell prestige for himself (though in an increasing number of under-developed countries the introduction of foreign technical experts is at least as likely to lose popularity as to win it) or jobs for friends and relations. His purpose may be analogous to that of a British Government in setting up a Royal Commission—to gain time or to evade responsibility for recommending unpopular measures. He may be quite conscious of the fact that the kind of technical assistance for which he is applying is unnecessary or premature or inappropriate, but may regard it as a necessary first step towards seeking a foreign loan or grant-in-aid. Or he may even be so simple minded as to imagine that technical knowledge is a valuable commodity in the absolute, to be turned on like water for irrigating drought-stricken fields. A joint effort should be made in each case by the suppliers and receivers of technical assistance to work out a properly co-ordinated plan for organic development, of which appropriate training in new techniques would be merely one essential element.

Surveying the Ground. Serious, prolonged and costly geophysical surveys are a usual prerequisite to development planning. It is, for instance, a hair-raising experience to hear plans being discussed for the development of hydro-electric power when one knows that no adequate records of local rainfall have ever been kept.

Studying the People. It is no less important that development planning should be preceded by adequate socio-anthropological investigations. Again and again efforts to implant new techniques

have been frustrated by resistance based on local traditions, customs, and beliefs, where the competent social anthropologist could have known beforehand the existence of these negative factors and perhaps devised means of circumventing them. For instance, a foreign agricultural mission sent to improve the agriculture of an Andean community decided, on technically unassailable grounds, that sunflower seeds would be a most suitable and remunerative crop. They tried to persuade the local farmers to plant sunflowers, and had to flee for their lives. A competent social anthropologist could have warned them that the people among whom they were working traditionally regarded the sunflower as the most unlucky and accursed of plants. In all appropriate cases, therefore, social anthropologists should both precede technical assistance missions in the field and accompany them when they are actually at work.

Studying Societies. Agencies responsible for supplying technical assistance should have a genuine understanding of political and social conditions in the receiving countries. Technical assistance is always a political issue, and political difficulties will always arise in connexion with the activities of technical missions and experts. It is particularly important to take into account local attitudes towards manual labour—and most technical assistance will be fruitless unless the right people are prepared both to undergo training and to dirty their hands in applying the new techniques. The results of fellowship and scholarship programmes for study abroad have, in particular, often proved disappointing. The national of an under-developed country who has been given an expensive technical training abroad will often find it far more remunerative or far more honourable, when he returns to his own country, to use the prestige that his foreign training has conferred upon him, or the incidental skills, such as knowledge of languages or office administration, which he has learnt, for the purpose of making a career quite unconnected with the technical branch of activity for which he has been trained. The capital cities of under-developed countries are crowded with former scholarship holders in jobs utterly different from those for which their scholarship provided training.

What Sort of Experts? Only highly qualified experts should be employed. A second-rate technician can do valuable work as a member of a team in a highly industrialized country. In an under-developed country the foreign expert has to work on his own and to cope with problems inevitably very different from those which he would have to face at home. He must therefore possess technical qualifications of the highest order, and in addition he must possess qualities of character, understanding, and adaptability which would not be indispensable in his own country. (He will often find that he can obtain far more progress by stimulating and encouraging than by actually teaching or practising his particular techniques.) He should, if possible, possess something of the zeal of the missionary.

But this requirement does not imply that he should be expected to work for love as a missionary is. To obtain really competent technical assistance experts, high rates of remuneration and satisfactory conditions of service must be offered. It is sometimes suggested that a high rate of remuneration and satisfactory conditions of service places the foreign expert in an invidious position *vis-à-vis* the local people with whom he has to work. Experience suggests that this fear is usually groundless. It is true that discontent and friction arise when the foreign employees of a business firm are paid much higher salaries than locally recruited employees doing comparable work. There is, however, little analogy between work for a business firm and work as a foreign adviser to a government.

The Importance of Being Modest. The foreign expert should always do his best to rid himself of feelings of superiority. He should bear in mind that he is not so much one individual working among other individuals less technically competent than he, as a representative of one community in organic contact with another community.[7] The community with which he is thus called upon to co-operate, and which he has to try to influence and advise, is a community with its own traditions, aspirations, and collective pride. These deserve respect from the members of other communities, and a sincere attempt to understand them should be made. And, in any case, a community which is trying to absorb new ideas and new techniques needs all its collective pride and self-confidence if it is to absorb the new ideas and techniques successfully. For the foreigner to flout local traditions and even prejudices can lead only to friction and frustration. He must remember that the community in which he is operating, though it wishes to acquire the technical knowledge that he can impart, may wish to use that knowledge for purposes different from those currently pursued in his own country. Scales of values vary from one community to another, and it is no use for the foreigner to try to impose scales of values which to him seem natural and inevitable but which are not acceptable to those whom he is instructing or advising. Moreover, he should always be prepared to admit the possibility that the methods he is used to adopt may be inappropriate under different circumstances to those to which he is accustomed, and that practices he has been taught to regard as obsolete or uneconomic may be best suited to the circumstances prevailing in the country to which he is sent on mission. The traveller in one extremely ' primitive ' Latin-American republic can—or could a few years ago—see a number of expensive steel and concrete bridges erected by a foreign engineering firm, as part of a technical assistance project, standing over a dried-up river bed. The engineers who were sent to put up these bridges were warned by

[7] This collective significance of technological export is well brought out by Professor S. Herbert Frankel in *The Economic Impact on Under-developed Societies* (Oxford: Basil Blackwell, 1953).

the local peasants that the river frequently changed its bed. They knew better than " a lot of ignorant niggers ", and proceeded to build the bridges where they thought they should be built and without paying any attention to local weather conditions. And so there the bridges are, high and dry, with the peasants fording the stream in its new bed hundreds of yards away just as they always did—a monument to the folly of foreign technical experts who are always sure they know best.

Ideological Exports. It ought to be superfluous, but perhaps is not, to suggest that particular caution should be exercised in any attempt to export or import such ideological items as systems of political organization, of public administration, and of education.

Technical Assistance and Development Planning. Technical assistance, as has already been pointed out, is likely to yield little result unless it is part of a general development plan. As President Truman pointed out, technical assistance and capital investment go hand in hand. But it is much easier and cheaper to supply technical than economic assistance. Political conditions in under-developed countries make it increasingly difficult to attract the foreign private investor. The economic activities which attract a foreign investor are, in any case, usually not those most desired by the politically conscious elements in the receiving country, nor those most conducive to balanced progress and development. Theoretical economic considerations notwithstanding, a healthy modern society is one with a reasonably well-balanced industrial system. Yet the local population is usually too poor either to finance a nation-wide system of industrial enterprise or to consume its products. This poverty is perhaps often exaggerated. A low material standard of living does not necessarily imply absence of cash for investment and consumption purposes. Peasants in under-developed countries (like peasants in France, for instance) will often deny themselves even the necessities of life in order to save. The trouble is that they save not in order to invest and not in order to buy the commodities that would tempt the ordinary citizen of an industrialized community—they hoard secretively in order to pay for ceremonies dictated by custom or to buy land at absurdly inflated prices. ' Technologies ' of investment and consumption are probably the most difficult to teach. The difficulty of creating new industries is increased by the fact that there is one form of knowledge that seems to know no frontiers and to spread the wide world over regardless of illiteracy, lack of communications, or linguistic barriers: the knowledge of the wage rates and standards of living enjoyed by the workers in the highly industrialized countries and particularly in the United States of America. However little else the factory worker or the miner in an under-developed country may know, he knows how much the miner or factory worker earns in the United States, and that know-

ledge is a perpetual source of discontent and agitation.[8] Nevertheless, industrialization does seem to be progressing in most under-developed countries, and there seems to be no doubt either that this is a socially healthy process or that it can be assisted by outside agencies of technical assistance and finance, subject to the appropriate safeguards. But if the highly industrialized countries are serious in their desire to promote the development of the under-developed areas, they must tackle the problem with the same seriousness and sense of urgency that has inspired their efforts to tackle similar problems at home—to revive 'depressed' areas, to create TVA's, to organize the 'welfare state'.

Co-ordination of Technical Assistance at the Centre. The development of under-developed countries and the supplying of technical assistance should be centralized and co-ordinated. There is at present far too much dispersal of money and effort. As President Truman pointed out, "this should be a co-operative enterprise in which all nations work together through the United Nations and its specialized agencies wherever practicable". Mr. Gordon Gray, in his *Report to the President on Foreign Economic Policies*, justified this proviso in the following terms: "In the case of development programmes particularly, operation through international organizations may be essential to accomplishing the basic purposes of aid. It is frequently not possible for any one country unilaterally to give effective guidance on internal operations without creating fears or suspicions of interventionist motives, which would defeat major purposes of the programme. Such programmes, therefore, will frequently be most effective if operated through international organizations, staffed in part by nationals of countries in which the particular under-developed country has confidence."[9] And the International Development Advisory Board recommends "the prompt creation of a new International Development Authority in which all the free nations will be invited to participate".[10]

The conception of an International Development Authority, adequately staffed, amply financed, and possessing all the requisite authority, is an inspiring one. Dare one hope for its realization in any foreseeable future? The precedents, it must be admitted, are not encouraging. The official international organizations already in existence and executing technical assistance programmes are

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[8] For an interesting discussion on this point see Chapter III of *Problems of Capital Formation in Under-developed Countries*, by Ragnar Nurkse (Oxford: Basil Blackwell, 1953).

[9] *Report to the President on Foreign Economic Policies*, by Gordon Gray (Washington: United States Government Printing Office, 1950), p. 98.

[10] *Partners in Progress: a Report to the President by the International Development Advisory Board* (Washington: United States Government Printing Office, March 1951), p. 73.

facing difficulties; the activities tend to be supervised, not by persons or bodies with a vested interest in successful development work, but by bodies composed of individuals who are often lacking in technical competence, whose interest lies rather in securing the formal adoption of over-ambitious projects or else in the securing of 'economies' regardless of efficiency rather than in securing effective progress. Political considerations, of the most petty kind, tend to take precedence over practical and human considerations. There is much inter-departmental jealousy and ill-will, and insufficient effective co-ordination. The 'practical' men are often too practical—they talk as though no development work, no form of technical assistance, is economically justifiable unless it results in an immediate increase of production; whilst the theorists are too theoretical, and talk in terms of a new heaven and a new earth, when what is wanted may be merely a steel plough instead of a wooden one—or even, strange though it may seem, the continued use, with or without modification, of apparently primitive and obsolete tools or techniques.

These reflections, and many of those voiced elsewhere in the Year Book, may sound discouraging. They are not intended to be so. The development of the world's under-developed areas, with all that that implies in financial investment and export of technology, is an historical necessity. Without it, the degree of civilization we have so far achieved can hardly survive. The human race does somehow contrive to 'muddle through' To call attention to some of the muddles and discuss remedies is neither to express despair nor to suggest that a certain degree of muddling and improvisation is not inevitable. But this Year Book will have rendered an invaluable service if it helps to draw attention not merely to successes already achieved—and there are magnificent successes to be entered on the credit side of the balance-sheet—but also to a certain number of risks and obstacles that experience has brought to light, that can be surmounted, that are in fact already being surmounted, but whose extent and nature must be realized and understood or much avoidable waste and disappointment will result.

David H. Blelloch.

CHAPTER TWO

CEYLON: CASE-STUDY OF EDUCATIONAL EVALUATION AND SOCIAL PROGRESS

Two factors have led to recent large-scale attempts to raise standards of living in those areas of the world which are socially and economically backward. Firstly, the growing sense of self-determination associated with the fact or potentiality of political independence. Secondly, the assumption by the West, largely through international organizations, of a new sense of responsibility for seeking progress in these areas. The former has led to a resurgent nationalism, the latter to widespread, large-scale schemes for economic development. Both have led to very great developments in education over a wide front.

Only a few years ago the expert, the pilot plan, the mission, free and compulsory primary education, the national-language campaign, and the like were welcomed as harbingers of the Age of Plenty. That hope is unfulfilled and what looked like a rosy future has, in all too many places, turned out to be a depressing present. Moreover, not only are old problems still with us, but new ones have often appeared. In Ceylon, for example, D.D.T. has almost eradicated malaria, and other health measures have also been successful. The survival-rate has increased, the net production rate stands among the highest in the world, but rice production is still among the lowest in the world. WHO has scored a triumph, but FAO has a new and bigger problem. There are to-day more schools—and prospects of an ever-increasing number of educated unemployed, together with a drift to urban areas which is a potential threat to production.

Five major groups of factors appear to lie behind to-day's situation:

Firstly, the vast scale of the problems to be overcome and the difficulties of tackling them in terms of men, money, methods, and materials.

Secondly, the tendency to misinterpret, misunderstand, or oversimplify the situation, so that the introduction of machinery is seen only as a problem in technological training, while in fact it

involves re-education for a new culture pattern with different motivations, organization, value-systems, and rewards.

Thirdly, a tendency to believe that 'progress' depends only upon technology and that machines can ultimately put the 'have-nots' on the same economic levels as the 'haves'—so that to-day over-industrialization is a target for many areas which for long have been, and for long will be, dependent upon a rural economy.

Fourthly, a preoccupation with training in skills and with the extensions of secondary and higher education along lines accepted from the West without sufficient regard to local social settings and culture patterns.

Fifthly, a too easy acceptance of quantitative achievement without regard to its qualitative basis, and even a tendency to assume that achievement is greater than it in fact is.

No one would deny that much has been done, but no one who knows any of the backward areas could deny that some evidence of disillusionment and frustration exists which, though it is but a mildly sarcastic commentary upon experts or missions at one end, at the other is a growing criticism of the abilities of democratic institutions and peoples. In this lies a threat sufficiently serious to challenge action. In that action a first and basic step should be the evaluation of what is being attempted and the results which are being achieved. Though such evaluation must range over many fields, it is of particular importance in education which, more than any other agency, must be the bed-rock of social progress.

It is to the problem of educational evaluation in relation to the search for social progress that attention will be given in this brief review. Inevitably it must differ from other reviews in this Year Book because it is concerned more with what needs to be done than with what has been done. However, the pilot studies reported here are perhaps enough to provide some factual evidence which will strengthen the claim that evaluation is an urgent need of to-day in relation to the search for social progress.

The Language Problem

Resurgent national sentiment has, in many parts of S.E. Asia, led to a desire to develop the indigenous languages, particularly to make them the media of official activities, law, administration, education, and the like, in place of the language of former European overlords. In Ceylon, English is spoken by about 6 per cent. of the population who have received Western education and is the accepted mother tongue of the Burghers (mostly of Dutch descent). Sinhalese, a derivative of Pali, is spoken by about 80 per cent., while Tamil, a Dravidian tongue, is spoken by 20 per cent. Sinhalese occurs nowhere else in the world. Tamil is used by some forty millions in India, Malaya, and Africa. Both have an ancient literature, but

modern writing in Tamil is far more extensive than that in Sinhalese. Each language has its own script.

It will be realized that this is a situation fraught with difficulty and full of partisan loyalties. Both Tamils and Sinhalese wish to retain their own language, but the significance of English (which in the past has been the passport to employment; and which it still is, because implementing national-language policies proves unexpectedly difficult) as a key to the outer world is also realized. The present policy is to press for a steadily greater use of Sinhalese and Tamil which, year by year, will become the media of instruction, with English as a compulsory second language.

Faced by such material difficulties as shortage of texts and teachers, legislation has made it possible to continue to teach science and arithmetic in English and to turn to the mother tongue later in these subjects than others. This provision appears entirely sensible until the situation is subjected to critical study.

Thus one study (1) [1] has shown that in Standard VIII (age 14) children can learn arithmetic more effectively in Sinhalese than in English. Another study (2) has shown the same to be true in regard to science at this stage.

In the writer's opinion this position is due to the fact that those responsible for planning educational procedures have, despite the sincerity of their intentions, allowed their attention to be restricted to certain factors to the neglect of others. They have, for example, been concerned more with the supply of books than with the ability of pupils to understand the books. Another danger is imminent in the preoccupation with vocabulary at the expense of semantics. In the interest of translation and original writing it is desirable, even essential, to have accepted terminologies. To confine action to the preparation of lists of equivalents, however, which is being done, is to ignore all that is implied in the modern study of linguistics.

There is, however, another aspect of this problem which is similarly neglected in Ceylon, though it is of grave importance. Can a nation be built from two components which differ in respect to ethnic and religious factors and which speak to each other through a third and foreign language?

Ethnic differences have been overcome by assimilation, and that quite quickly, as post-war migration has shown. Peoples of different religious persuasion can live together, as India and Pakistan have shown, despite the Partition troubles. Language, however, is a barrier which presents different problems. India has accepted the 'Language State' only recently and under pressure. Overriding it is the policy of a national language and a regional language. In Ceylon, so very much smaller, and where inter-communal tensions

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[1] The numbers hereafter will refer to references in the appended bibliography—EDITORS.

already exist, the question of language in relation to national unity is not to be ignored—yet it is in fact being ignored in language legislation. The Burghers are concerned about their position in regard to language, for they are anxious to retain English, their adopted mother tongue, as a cultural link with their European origin. The Tamils have not hesitated to express the view that their language interests are likely to be overridden by those of the Sinhalese. Teachers and parents are concerned lest the linguistic divisions of school days should lead to communal differences in adult life. Others have not only denied that it might, but even deny the existence of any inter-group tensions.

Here is a problem urgently in need of evaluation study in order that the potential influence of language may not be a barrier to inter-group harmony. Such a study would need two steps: first the exploration as to whether or not there are sub-cultural cleavages among Ceylonese children; second, exploration of the relations between such cleavages as do exist and the operation of the language policy. The first step has demonstrated (3) the existence of sub-cultural cleavage. The second step in evaluation has yet to be completed but, from work now in preliminary stages (4), it appears certain that these inter-group tensions are related to linguistic organization in the school and that they can be reduced where steps are taken to break down linguistic isolation.

The need for more such work is obvious, but the little which has been done makes it clear that language policies need to be considered in both intellectual and social terms, especially in regard to the dynamics of inter-group relationships.

Social Studies and Inter-group Attitudes

Language is but one factor which operates in the field of inter-group attitudes. There are many others, among which the teaching of history is important. This has already received notice in a series of UNESCO publications and was the subject of a UNESCO Sub-Commission Report in Ceylon (5). The historical background of Ceylon is one which provides rich opportunities for inciting partisan feelings. In recent years this has been evident in many ways, so that the preparation of a special report on the matter in Ceylon acted as a form of evaluation. It disclosed very definite evidence of special pleading and partisan attitudes in local history books, and even in the presentation of history in official publications. Though it cannot be the only factor it is certainly one which operates, together with language, to foster inter-group attitudes in which tension is evident.

Some studies of inter-group attitudes have been made, or are in progress, in Ceylon to which reference may be made here. The writer (6) has developed graphical and numerical methods for the presentation of stereotypic data, obtained from free-response stereo-

type statements, about the characteristics of different kinds of peoples. Using these methods he has shown (7) that Sinhalese children, though they rate themselves as superior to the Tamils, do not do so in regard to the Burghers or the English. At the adult stage, Sinhalese and Tamils rate themselves superior to each other, but inferior to the English. To the Burghers they show an inhibited response. Here lies a problem relating to the sense of national self-sufficiency.

These findings open up the way for future research, particularly with regard to the evaluation of the effects of history teaching on inter-group attitudes. This is a point to which those responsible for drawing up the curriculum and syllabus have so far given no attention. The necessity for doing so, especially in situations where history is so much concerned with conflict rather than harmony, needs no stressing.

From a study of history and from social studies our pupils are supposed to obtain not only information, but attitudes and concepts. The ability to form social concepts has been little studied, so that the assumption that any particular programme or procedure will lead to a better understanding of, say, ' democracy ', ' responsibility ', ' government ', and the like rests upon hope rather than demonstration. In Ceylon, as elsewhere in S.E. Asia, attention is being given on an increasing scale to national history, at the expense of world history. At this moment in world history, when the possibility and need of international co-operation is so great, it is important to ensure that the foundations for this rather than a narrow nationalism are laid in youth.

Rural Education: in the School

The peoples of S.E. Asia live on and by the land. In Ceylon plantation crops—tea, rubber, coconut—are the main elements of national economy and rice the staple of diet. Farmers rank first in the caste status system. Despite these things the standard of living is lower in rural than urban areas, and the rural population the poorest section of Ceylonese society.

The essence of the situation is one which can be found in U.S.A., U.K., Australia, New Zealand, and doubtless elsewhere. It is briefly that rural life is unattractive and the many who perforce live it seek migration to urban areas. This urban drift, though in Ceylon it has not yet reached the proportions seen elsewhere, is a threat to productivity. Rural youth wants an urban job, and a white-collar one at that. Despite the vast extension of educational provision, which in Ceylon must be as great as anywhere in the world, this threat to rural life continues (8).

Ceylon differs, however, from U.K., Australia, and New Zealand in this connexion in an important respect. Education in Ceylon is centralized and, as so often appears in such situations, it is planned

basically for urban areas. Moreover, even the attempts to improve rural education are based on the provision of large central schools, a method which has been criticized in New Zealand (9), though in Tasmania the area schools are looked upon as satisfactory solutions to a similar set of problems (10). In the countries mentioned there have been attempts to define the educational needs of rural societies and to evaluate educational procedures as a step towards their improvement. In S.E. Asia similar needs exist but, though Burma has been the subject of a special UNESCO report and India has lately tackled the problem, far too little has been done. This is particularly true of Ceylon, where rural education, neglected by the British, is in danger of misdirection by the Ceylonese. This may be illustrated as follows. Realizing that there is a problem to be solved, provision has been made for increased practical work in schools and for the training of vocational teachers. Agriculture is to figure prominently in this scheme and a new syllabus for agricultural education has been drawn up (11). Unfortunately this syllabus appears to be formally didactic and fails to offer opportunity and guidance for the developing of the new attitudes towards farming which are so urgently needed (12). In other practical subjects there tends also to be the same reliance on formal procedures, book work, and the authoritarian approach to teaching. Moreover, not all would agree that to include 'motor mechanisms' as a 'practical' subject, which will inevitably be studied from books, is sound or likely to achieve what is presumably sought . the laying of the foundation of technical ability. Science itself tends to be lacking in a real basis of experimentation and is divorced from the local environment (13). This is especially so in biology which, though it could do so much to improve health practices and agricultural methods, tends to be entirely formal and concerned with the logical content of academic biology rather than with social needs (14).

It must not be thought that such criticisms are new in Ceylon. Before the period of Independence they figured in a Special Report (15), and they have been repeated frequently since then. Failure to act on them arises from many causes, but particularly through the lack of evaluation studies in which educational success is estimated in social terms.

Rural Education: of the Adult

In Ceylon, and elsewhere in S.E. Asia, it is realized that attention must also be given to the education of the adult community. In Ceylon, apart from adult education *per se*, there are activities sponsored by several departments of State, such as Health, Agriculture, Rural Development, as well as by international agencies, and by voluntary bodies. These activities, taken as a whole, are undoubtedly making a contribution to social progress, but it must be asked whether this is as great as it could be and whether the returns

are commensurate with the costs involved? It may well be that modifications of procedures, or alternative procedures, such as the development of folk high schools as in Denmark, would give better returns. Evaluation studies over the whole field of adult education, particularly in rural areas, are greatly needed, and these must be aimed also at defining the basic problems involved.

The situation may be illustrated with a typical example. The writer visited a small remote village in N.W. Province where an enthusiastic primary teacher conducted what is considered to be one of the best adult centres. The main work was centred on literacy, though attention was also given to music, folk-dancing, and games. Literacy materials were few in number and they centred round history, religion, and myth, with no reference to the modern world, nor to the problems of the local environment. Materials were provided for music, dancing, and games. There was no practical work and no experimental work, such as carpentry or manurial experiments. Teaching was organized by class procedures with the authoritarian social climate characteristic of school life. The school had been provided by government but added to by the villagers themselves, who contributed both money and constructive effort.

Having noted the co-operative work which went into the school building the villagers were asked why they did not co-operate to repair and improve their tank—on which life depended. Their spokesman answered in a single word . . . jealousy . they would not work together on a job which would give unequal returns, as some owned more land than others and some had no land.

This situation, which must be common enough in Asia, is a challenge to all concerned with the search for social progress. There are two particular points to be considered. Is the content of rural adult education appropriate? Are the methods employed appropriate? Neither can be answered until evaluation studies have been made upon extensive scales, nor until the fundamental factors in the situation are defined.

Among these, attitudes rank high. These villagers would not co-operate, nor would they accept responsibility. Jealous of each other, they were prepared always to wait upon official action—the we/they attitude so well known to the social reformer seems to be an important element in the conservatism of rural communities.

In order to resolve problems it is necessary to be aware of them. Those who are aware of the results of modern work on social dynamics in relation to action programmes tend to be research workers, rather than administrators or even teachers. Thus it is possible that many in Asia who are concerned with social action programmes, though they are aware of difficulties, are not aware of the basic problems underlying them. In order to explore this the writer investigated the opinions of rural development officers as to the basic problems which have to be tackled (16). Social relation-

ships, leadership qualities, ability to co-operate, and status problems dependent upon caste were not mentioned as being among the most important problems, and occupied only a low position among the second most important problems to be overcome.

These officers, typical of a majority in Ceylon, and probably in S.E. Asia, are aware only of the authoritarian relationships of the society in which they live. They see their task as that of telling the villager what to do, not as working with him in order to build up a new democratic social climate. It is this authoritarian approach, this attempt to impose new patterns from the top, rather than to develop them from the bottom upwards, which is considered to be a main cause in the slowness and small scale of rural progress by the author of the only paper concerned with evaluation in this field in Ceylon (17).

It may be pointed out that those who seek social progress are already aware of the insufficiency of programmes dependent upon an imposed authoritarianism and have consequently developed other approaches. One of these is the idea of the 'felt need' (18). No one is likely to deny the significance of making needs articulate, but the insufficiency of this philosophy, as a universal basis, may be seen in the case of the village conditions referred to earlier. Every villager in the Dry Zone of Ceylon knows that his very life depends upon water and centres round the tank. But the only felt needs which brought the villagers together were those arising from social pressures which have made education a search for status. To that end villagers co-operated to build a school, in order to give youth a chance to do better than age had.

Evaluation needs to be applied not only to the conceptual bases of social action programmes, but also to the procedures which arise from these basic concepts, and the attention lately given to this (19) is a welcome sign. One aspect needing still greater attention is that of time, because cultural change is a process in time. It is the time factor which makes critics who know the situation sceptical about the 'quick-change techniques' so common to-day. Is it likely that a three-day contact with the caravans, exhibits, films, demonstrations, and experts (usually through an interpreter) of Social Education and Teach Everyone teams will remodel man and his way of living? Who would set out to change village life in U.S.A. or England in a week-end?

Because adult social attitudes and interrelationships have their antecedents in childhood and youth it may here be pointed out that in two other studies (20, 21) it has been demonstrated that preoccupation with personal-social relationships forms a large segment of the stereotypes which Ceylonese hold of other peoples. Moreover, an experimental classroom study (22) has shown that interpersonal tensions can be reduced by simple procedures which achieve greater degrees of group integration. This finding is in

keeping with the general trend of work in social dynamics, and should be an added incentive to the development of evaluatory studies relating to the techniques adopted in the search for social progress.

Special Abilities

A study in Ceylon (23) has shown that university students show a marked dichotomy of ability to perform on tests involving language factors on the one hand and non-language factors on the other. This finding has since been confirmed and extended to other groups. Some typical figures are given in the following table.

CENTILE SCORES OF CEYLONESE SUBJECTS ON SUB-TESTS INVOLVING LANGUAGE AND NON-LANGUAGE FACTORS IN THE CALIFORNIA TEST OF MENTAL MATURITY

Group Tested	*N.*	*Mean Centile Scores*	
		Language	*Non-language*
U.S.A. Norms	—	50	50
University undergraduate (male)	143	76·8	12·0
2. 1st year, training college	100	48·7	5·2
3. 2nd year, training college	100	69·5	4·2
4. University graduates .	100	87·7	4·6
5. 1st year, technical college	151	38·5	13·8

1. *Data from Straus* (23). 2–5. *Data from Green* (24).

An investigation (24) of practical skill among 14-year-old boys showed that, as measured by Alexander's battery (Koh's blocks, Pass-along and Cube-construction), they exceeded the mean score of the standardizing English population. On the other hand, technical college students showed a mean score of −1·9 against a norm of 49·8 for U.S.A. students on D.A.T. Space Relations Test. Similarly, they show low scores on tests of mechanical comprehension, even in groups of average or better-than-average general ability.

From results such as these the only conclusion possible appears to be that despite the possession of manual dexterity in early youth the student emerges from higher education without having developed abilities for spatial perception and other skills involving non-language factors which are considered to be essential prerequisites for success in technical occupation, and which are not unimportant in all productive work.

Vocational Attitude

Technology demands not only certain basic skills, but also certain attitudes, for example in relation to occupations, so that any evalua-

tion of education as a preparation for a technological society must include studies of vocational ambitions. The demand for white-collar work, so well known in the West, is also present in the East. In Ceylon it has been the subject of detailed study (25), and the position can be summarized as shown in the table below, which relates the percentage distribution of three major fields of occupational choice, among an island-wide sample of secondary-school leavers, to the occupational needs of the society as reflected in the distribution of the gainfully employed under the same categories in the most recent Census Report (26).

RELATION BETWEEN VOCATIONAL AMBITIONS AND OCCUPATIONAL NEEDS OF SOCIETY IN CEYLON

Occupational Groups	*Ambitions Preferences*	*Needs % Employed*
Distribution	23	21
Production	25	64
Services	52	15

While it is true that many of those gainfully employed in productive work will come from primary rather than secondary school level, the disparity between ambition and need in productive enterprise is considerable. Even more so is this true in relation to services. The Census category of services includes professional men (doctors, lawyers, etc.) and servants, nurses, street sweepers, etc. The former group is 6 per cent. of the gainfully employed, the latter 9 per cent.; of the 52 per cent. of secondary-school leavers who seek work in the professions all are aiming at the high-level jobs for which only 6 per cent. of the working population is needed. Moreover, it must be noted that practically the whole of secondary education, in terms of content and method, is aimed at preparation for this kind of work. Again, the formal, impractical, and highly academic procedures of education and the restricted opportunities of home life give little chance to develop the qualities of inventiveness and resourcefulness which are so important both in technology and in other productive work.

Caste, economics, and opportunity of employment condition not only vocational ambition, but the prestige status of occupations against which occupational choice is made. In Ceylon, whether among pupils (27) or adults (28), the prestige status of occupations is such that manual occupations rank low and professional service ranks high. These facts help to explain the antipathy towards the practical schools and the unwillingness to follow practical courses (e.g. carpentry and agriculture) in the secondary schools. Moreover, apart from the analysis of the situation already given, they underline the need to evaluate educational and vocational pro-

grammes at both national and international levels. Two examples may be given.

In Ceylon the Selective Test at 14+ is used to divide the academically able from the less able. The former go to academic secondary schools, the latter are supposed to go to practical schools. The former will not choose practical subjects, the latter only under compulsion. However difficult it may be to devise any other scheme, this procedure should not be adopted without noting an important contingency which may follow from it. Because none of the able will follow practical subjects and enter industry at the bottom, and because those who enter at the bottom will come from the least able pupils, Ceylon will fail to produce enough of that type of man on whom industry is peculiarly dependent—the shop foreman. He is the man who, in Western industrialized societies, entered the works at the bottom, worked at the bench and in the foundry, and made his way upward through native ability. As foreman he stands as a link between practice and theory. Through experience he understands machines and processes, through ability he can understand the designer and theoretical expert. He can control men, understand machines, and interpret the drawing office and the machine shop to each other. Lack of such men may have already been a factor in Ceylon's many industrial failures. Continued lack of such men may jeopardize the development of technological enterprises in the future (29), even if these are to be on a small scale . . . and no one who knows Ceylon can expect or want a vast Industrial Revolution.

The evaluation of programmes and proposals in these fields is equally necessary at international level. At the conference organized by the International Labour Office at Kandy in 1952, stress was laid on the importance of practical education related to environment and occupational opportunity. While this reflects a viewpoint which was already widely accepted among educationists who were seeking progress in Asia, there could have been few prepared to agree with the reasons offered for this. Thus in papers relating to item IV of the Agenda it was stated that "*where school curricula are too theoretical they cannot achieve this purpose and therefore will fail to attract pupils or win the confidence of the parents*". This is in direct opposition to the results of every study of vocational attitude available for Ceylon, and does not appear to agree with the situation in India, where what is sought is academic education of a theoretical kind which will lead to white-collar occupations. This interpretation may of course apply in societies where caste is not operative. In such cases it may also be, as the Conference assumed, that familial occupational continuity is the result of factors other than caste. Elsewhere, especially in Ceylon and India, caste exerts so considerable an influence upon occupational opportunity that education has become a search for status by escaping from caste limitations.

Conclusion

Three things have been attempted in this review:

Firstly, to present a brief argument concerning the need for evaluation in education in relation to social action programmes in backward countries. *Secondly,* to describe some situations in which evaluation could be applied. *Thirdly,* to indicate some results of pilot studies in this field.

In the writer's opinion no need can be more urgent than to call a halt in the spate of schemes which aim at social progress through educational procedures. Not to abandon them, but to subject their purposes, procedures, and products to critical evaluation. Without this we are likely not only to waste time, money, and effort, but also to endanger future progress and international goodwill.

Finally, it may be pointed out that evaluation must be concerned not only with quantitative but also with qualitative results. It must be a continuous process, because social action programmes have a cumulative effect on social change which necessitates continuous adjustments of method. Above all, it must be a comprehensive process, concerned not only with changes of habit, skill, and knowledge, but also with the wider problems of motivation, value systems, ambitions, personality structure, and social organization.

T. L. GREEN.

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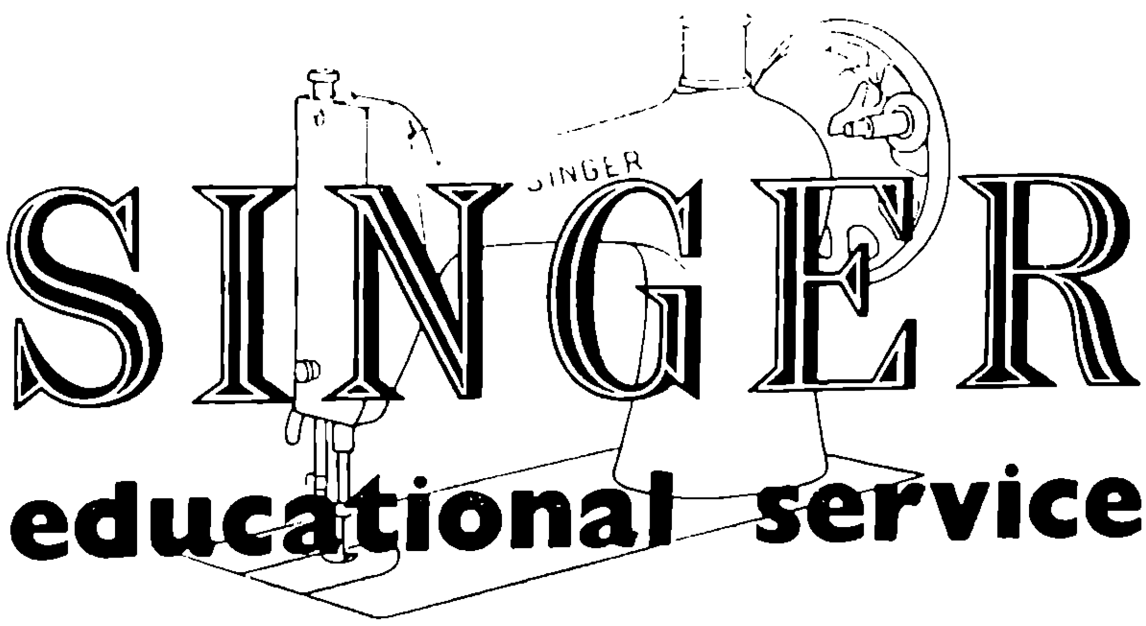

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